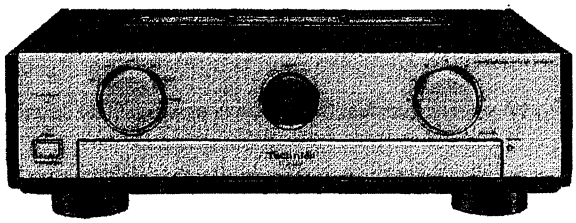
ORDER NO. AD9809169C2

Service Manual

Amplifier

Stereo Control Amplifier

SU-C3000



Colour
(N).....Gold Type

Areas
(E) ..... Europe.
(EB) ..... Great Britain.
(EG)..... Germany.

Specifications (DIN 45 500)

Control AMP Section

Input sensitivity/impedance:
PHONO MM 3.5 mV/47 kΩ
LINE1, LINE2, CD, TAPE 1, TAPE 2 200 mV/47 kΩ
Total harmonic distortion:
PHONO MM-REC OUT 0.003 % (20 Hz – 20 kHz)
LINE1, LINE2, CD, TAPE 1, TAPE 2-PRE OUT
0.002 % (20 Hz – 20 kHz)
S/N:
AC operation
PHONO MM 80 dB (93 dB, IHF '66)
LINE1, LINE2, CD, TAPE 1, TAPE 2
112 dB (113 dB, IHF '66)
124 dB (IHF A Gain=0 dB, S=2V)
Battery operation
PHONO MM 80 dB (93 dB, IHF '66)
LINE1, LINE2, CD, TAPE 1, TAPE 2
113 dB (116 dB, IHF '66)
124 dB (IHF A Gain=0 dB, S=2V)
Frequency response:
PHONO MM RIAA standard curve ±0.2 dB
(20 Hz – 20 kHz)
LINE1, LINE2, CD, TAPE 1, TAPE 2 0.7 Hz – 125 kHz
(+0 dB, – 3 dB)
+0 dB, – 0.1 dB (20 Hz – 20 kHz)
Phono maximum input voltage:
MM 100 mV (0.05 %)
Output voltage:
PRE OUT 1, 2 2 V/47 Ω
Maximum output voltage:
PRE OUT 1, 2 6 V (20 Hz – 20 kHz, 0.007 %)
Phone input capacitance: 250 pF

General

Power supply:
(E),(EG) areas AC 230 V, 50 Hz
(EB) area AC 230 V – 240 V, 50 Hz
Power consumption: 36 W
Dimensions (W × H × D): 453 × 134 × 375 mm
Weight: 11 kg

Notes:
1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. For (EB) area : The specification values given have been measured while using a 240 V power supply.

⚠WARNING
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics®

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■ Before Repair

(1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C702, C707, C708) in order to discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230 V/240 V.

Power supply voltage	AC 230 V, 50 Hz	AC 240 V, 50 Hz
Consumed current	55 ~ 95 mA	52 ~ 92 mA

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

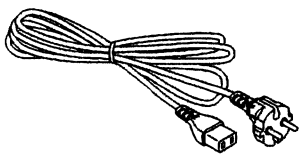
1. Switch OFF the power.
2. Determine the cause of the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

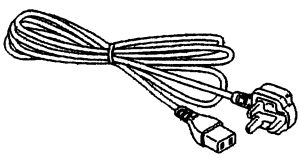
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ Accessories

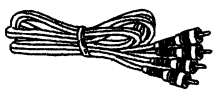
- AC power supply cord
  (E) and (EG) areas : (RJA0062-K) 1



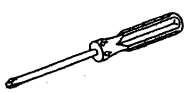
(EB) area : (RJA0063-K) 1



- Stereo connection cable
  (SFDHM03N02) 1

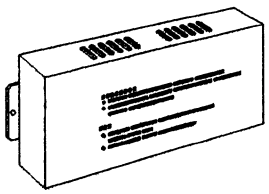


- Screwdriver 1



- Screw
  (RHD30037) 2

- Battery case*
  (RFKNUC3000EN) 1



Note:

*This unit is designed to run on power to get the best sound possible. Use the battery especially designed for this unit. (part no. SH-U3000E-K)
Use a battery other than the designated one is dangerous.

■ Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ⓚ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

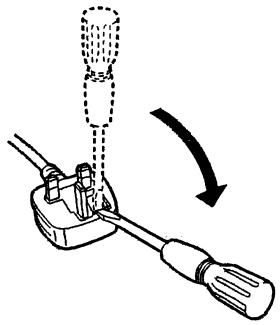
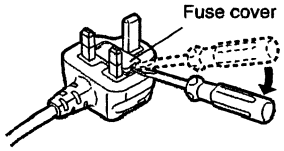


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

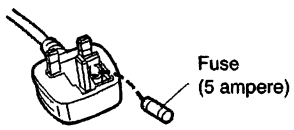
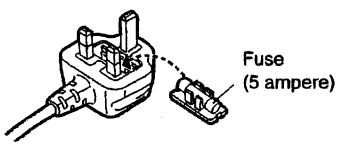
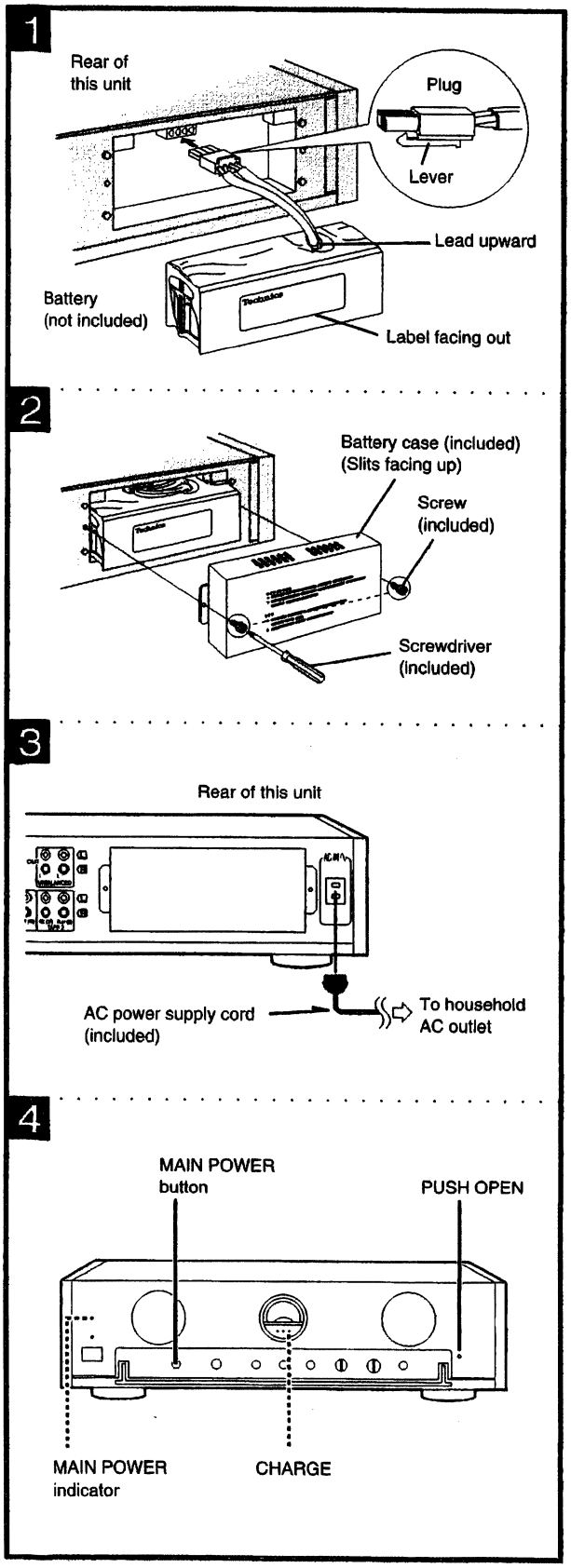


Figure B



■ Prior to Connections



(For United Kingdom only)
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 3 BEFORE CONNECTION.

The battery takes 12 hours to fully charge.
Before connection to other components, follow steps 1 to 4 so that the battery starts charging immediately.

Ensure [MAIN POWER] is off when installing or removing the battery.

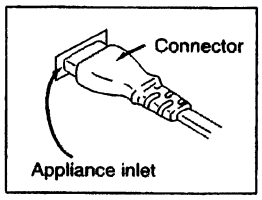
1 Insert the plug of the battery into the jack inside the battery compartment.

To disconnect the plug
Lift the lever and pull.

2 Put the battery into the compartment and attach the case with the two screws.

3 Connect the AC power cord.

Insertion of Connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.

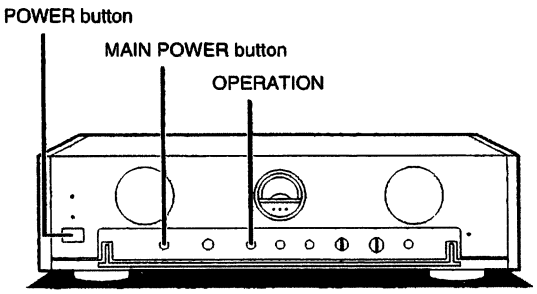


4 Turn the MAIN POWER on.

① Press [PUSH OPEN] to open the cover panel.
② Press [MAIN POWER] button to select ON.
(→)
MAIN POWER indicator lights up.
Charging of the battery starts.
The CHARGE indicator lights while the battery is charging and goes out when fully charged.
Now carry out the connections and operations on the following pages, leaving MAIN POWER ON to charge the battery.

Note

For your safety, POWER should be left standby until all other connections are complete.



Battery power and this unit's power system

Recently, audio makers have been looking at the polarity of the power cords used with systems in an effort to reduce noise caused by power sources as much as possible. Batteries are independent from AC power sources and so noise caused by power transfer is cut, making them the ideal source for audio equipment.
This unit uses a 2×12 V 2.2 Ah sealed lead-acid battery for better sound quality.

Features

The battery is charging whenever MAIN POWER is on and DC is not selected as the power source. This means recharging takes no extra trouble.
Normal on/standby operation is done with the POWER button, and switching between AC and DC operation is done with OPERATION.

Note

Observe the following points for your safety and to keep the battery performing well for as long as possible.

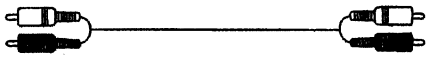
- The battery used is a lead acid battery. It differs from regular Ni-Cd rechargeable batteries in that if it is fully discharged, recharging may be impossible. Ensure that the battery is recharging whenever it is not being used, leave MAIN POWER ON and switch to AC power after finishing with the battery. There is no danger of over-charging the battery.
- Avoid overheating.
  If the unit is to be used in a rack, leave the rear of the rack open, leave some space between the unit and the wall, and allow sufficient ventilation.
- If you decide not to use the battery, fully recharge it, remove it from the unit, and store it in a cool, dry place. The battery still naturally discharges in this condition, so every 6 months reconnect to the unit and recharge it.
- If the unit itself is not to be used for a long period, fully recharge the battery, switch MAIN POWER off, and unplug the power cord from the outlet (recharging is unnecessary for a month if this is done). Recharge the battery again before use.

Replacing the battery

If effective life of the battery reduces to about 3–4 hours even after being fully recharged, the battery is approaching the end of its serviceable life.

■ Connections

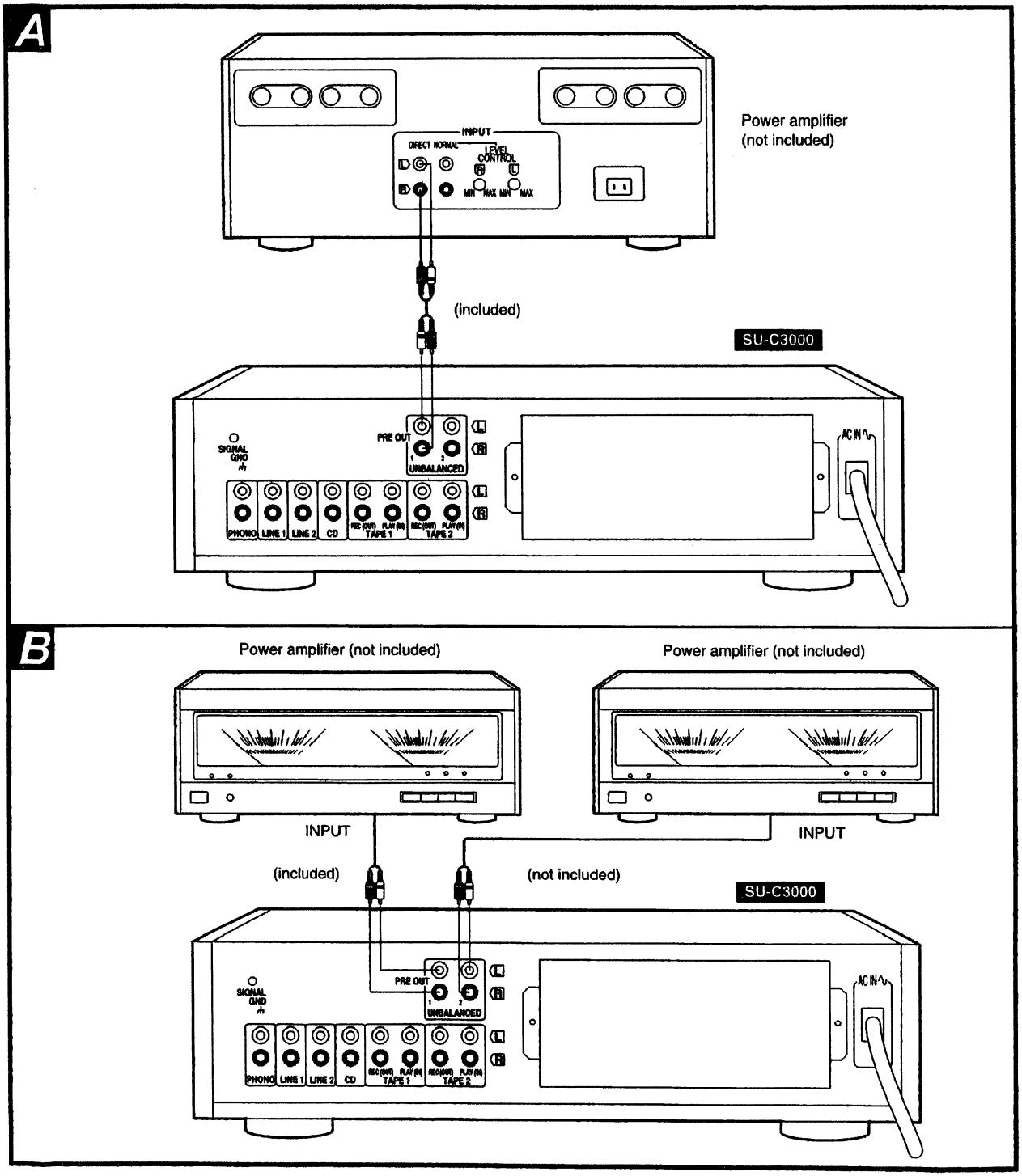
Stereo connection cable White (L) Red (R)



Connections can be made with [MAIN POWER] on but [POWER] should be switched to standby.

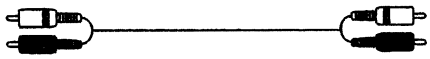
Connecting a power amplifier A

PRE OUT 2 terminals B :
For connecting a second power amplifier.
Using the PRE OUT 2 terminals allows you to make use of bi-amp and biwiring.



Stereo connection cable

White (L)
Red (R)



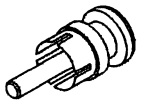
Connecting other audio components A

PHONO terminals

Connect to a turntable only. Do not connect any other sound source to these terminals.

The short-pin

The short-pin in the PHONO jacks is there to prevent noise. Leave it inserted when not using these jacks. Do not insert into any of the other jacks, as this can cause damage.



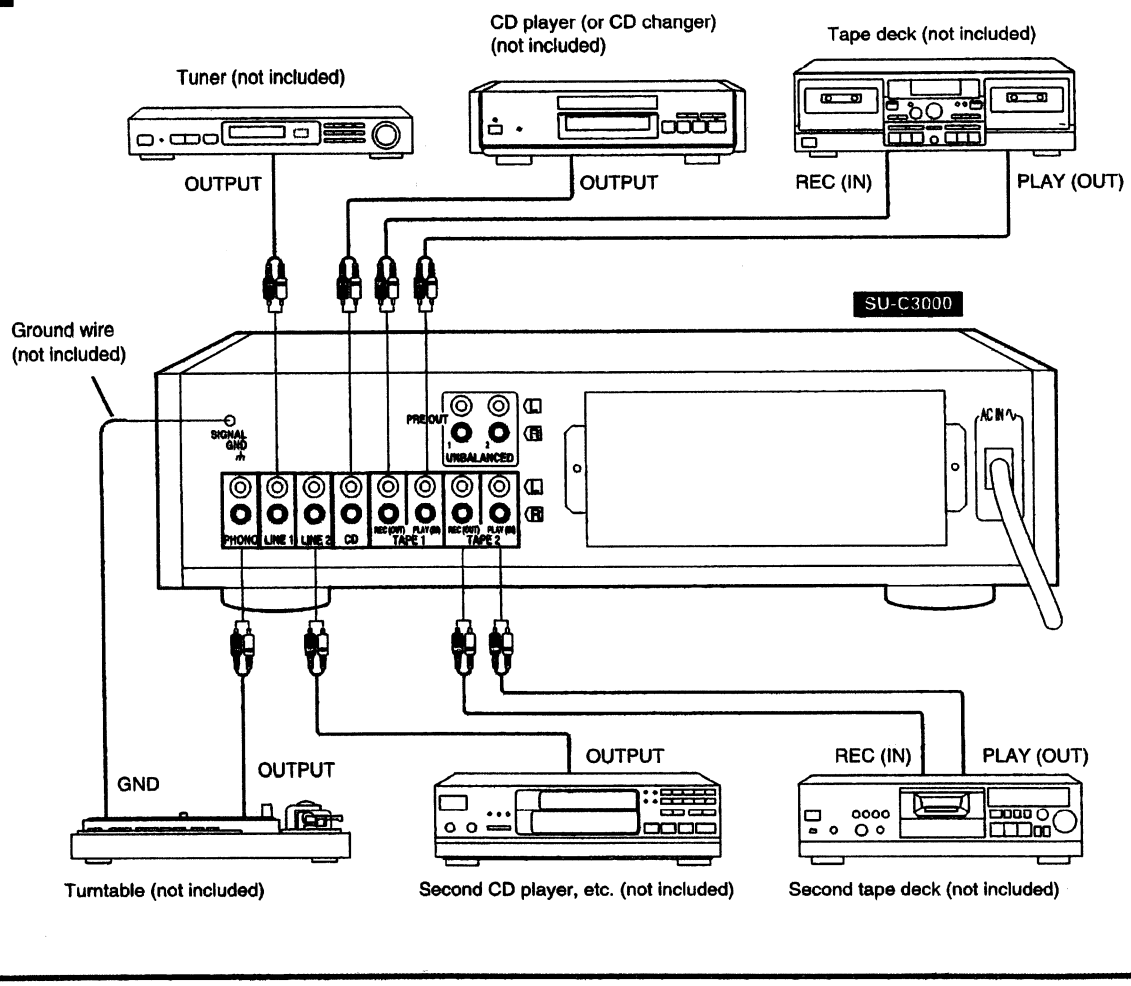
LINE 1 and LINE 2 terminals

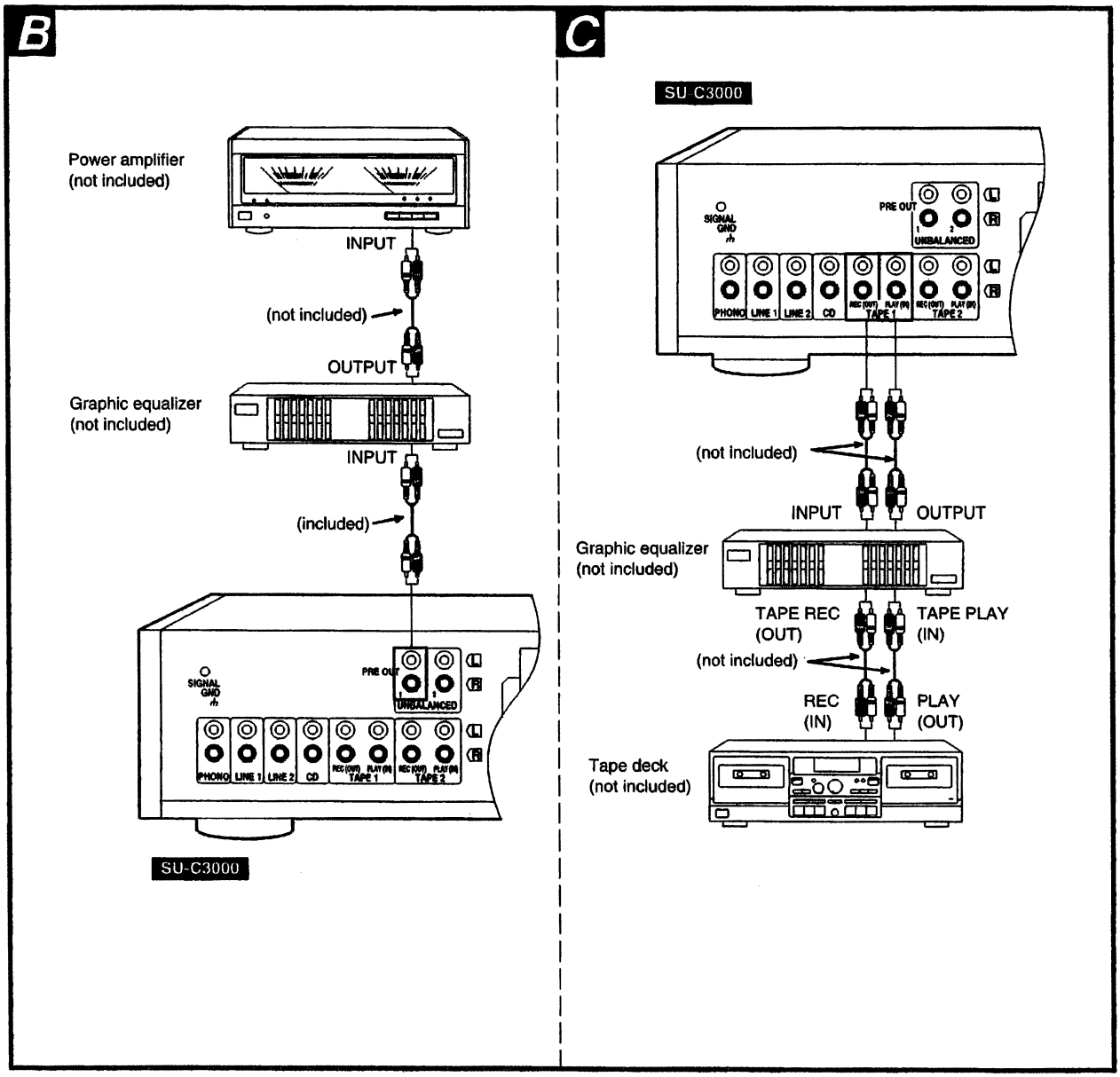
Connect to extra components, such as a tuner, second CD player, etc.

When connecting a graphic equalizer

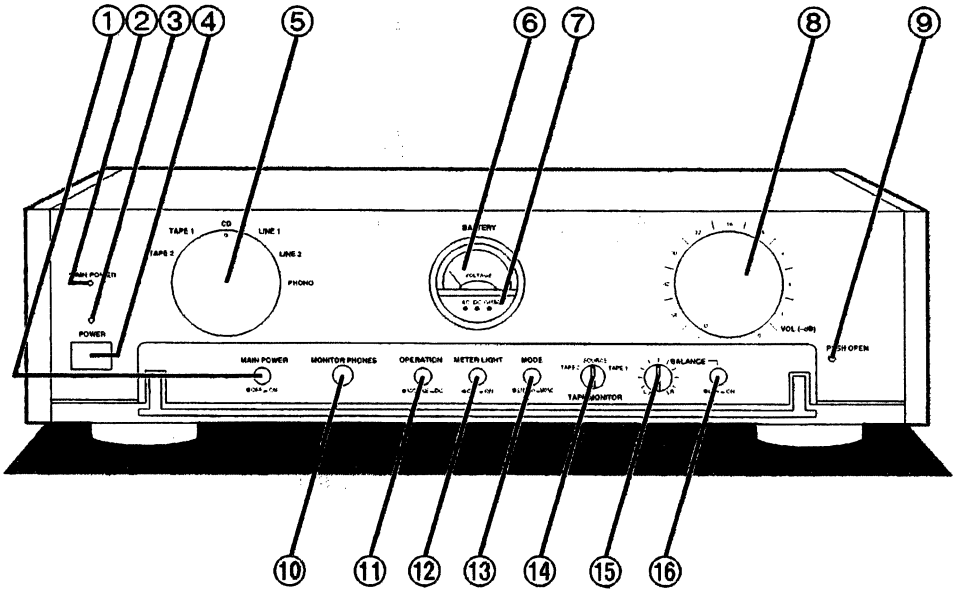
Connect it between the PRE OUT terminals of this unit and the INPUT terminals of the power amplifier. B
If sound quality is not satisfactory, connect it between this unit's TAPE terminals and the tape deck. C

A



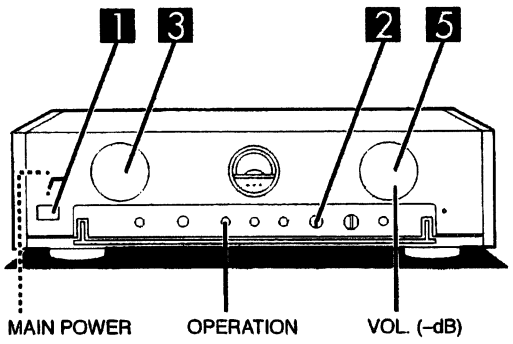

B
Power amplifier
(not included)
INPUT
(not included)
OUTPUT
Graphic equalizer
(not included)
INPUT
(included)
SIGNAL GND
PRE OUT
UNBALANCED
PHONO
LINE 1
LINE 2
CD
TAPE 1
TAPE 2
SU-C3000
C
SU-C3000
SIGNAL GND
PRE OUT
UNBALANCED
PHONO
LINE 1
LINE 2
CD
TAPE 1
TAPE 2
(not included)
INPUT
OUTPUT
Graphic equalizer
(not included)
TAPE REC
(OUT)
TAPE PLAY
(IN)
(not included)
REC
(IN)
PLAY
(OUT)
Tape deck
(not included)

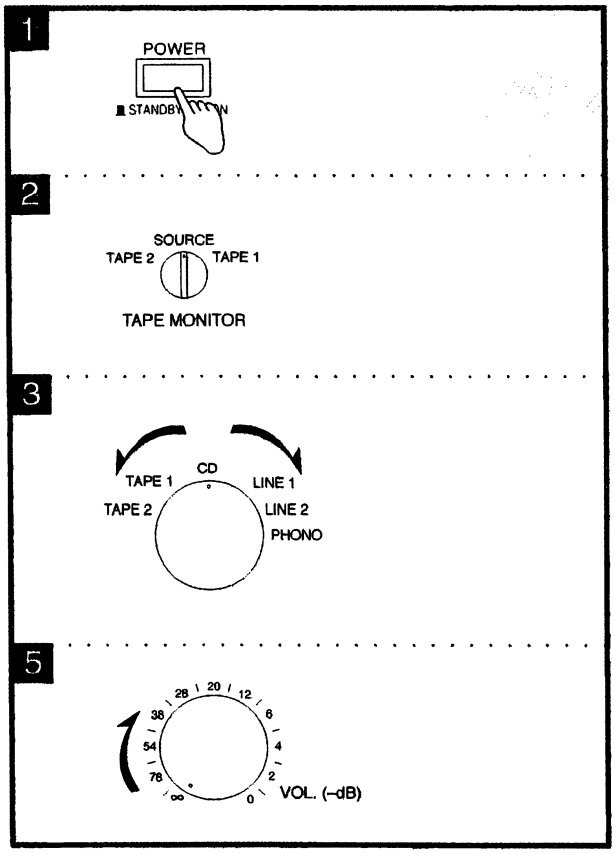
■ Front Panel Controls



No.	Name
①	**Main power switch [MAIN POWER, ▟ OFF ▁ ON]**
②	**Main power indicator [MAIN POWER]** Lights when [MAIN POWER] is on (▁), indicating the unit is in standby mode. Recharging begins if the rechargeable battery is connected and its voltage is low. While this indicator is lit, pressing [POWER] switches the unit between on and standby.
③	**Power indicator [POWER]**
④	**Power " ▟ STANDBY ⏻ ▁ ON" switch [POWER, ▟ STANDBY ⏻ ▁ ON]** Press to switch the unit from on to standby mode and vice versa when [MAIN POWER] is on. In standby mode, the unit is still consuming a small amount of power.
⑤	**Input selector**
⑥	**Voltage meter [BATTERY]**
⑦	**Operation indicators [AC, DC, CHARGE]** **AC:** Lights when operating on AC power. **DC:** Lights when operating on the battery. **CHARGE:** Lights when battery is charging.
⑧	**Volume control [VOL. (–dB)]**
⑨	**Panel open button [PUSH OPEN]** Press to open the panel. Close by hand.
⑩	**Headphone jack [MONITOR PHONES]**
⑪	**AC/DC operation button [OPERATION]**
⑫	**Voltage meter light button [METER LIGHT]**
⑬	**Mode selector [MODE]**
⑭	**Tape-monitor selector [TAPE MONITOR]**
⑮	**Balance control [BALANCE]**
⑯	**Balance control ON-OFF button [▟ OFF ▁ ON]**

■ Listening to Sound





Preparations:
- Check the MAIN POWER indicator is illuminated.
- Set the volume control [VOL. (–dB)] to the "∞" position.

1 **Press [POWER] button to select ⏻ ON.**
POWER indicator lights up.
Next, switch on the power of the power amplifier.

2 **Turn [TAPE MONITOR] to select SOURCE.**

3 **Turn the selector to select the desired source.**

TAPE 2: Set to this position to listen to tapes from the tape deck connected to the TAPE 2 terminals.
TAPE 1: Set to this position to listen to tapes from the tape deck connected to the TAPE 1 terminals.
CD: Set to this position to listen to compact discs from the CD player (or CD changer) connected to the CD terminals.
LINE 1: Set to this position to listen to equipment connected to the LINE 1 terminals.
LINE 2: Set to this position to listen to equipment connected to the LINE 2 terminals.
PHONO: Set to this position to listen to phono discs from the turntable connected to the PHONO terminals.

4 **Start the desired source.**
Refer to the appropriate operating instructions for details.

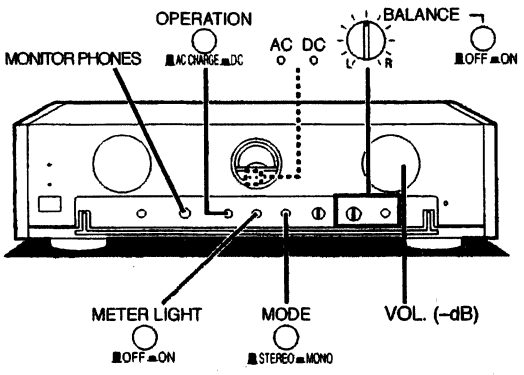
5 **Adjust the volume.**

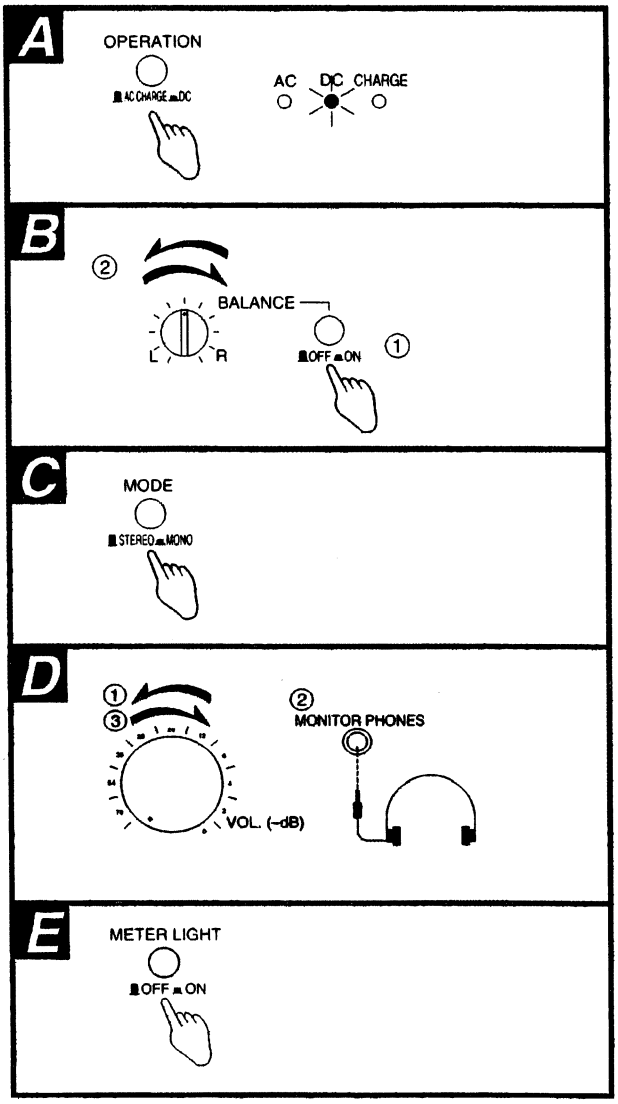
After you are finished
1. Set the volume control [VOL. (–dB)] to the "∞" position.
2. Turn off the power of the power amplifier.
3. Turn the POWER to this and the other units off.

When using a timer, OPERATION should be left in the ⏻ AC/CHARGE position.

Note

MAIN POWER should normally be left on when POWER is turned off.





Switching between AC and DC operation A

AC operates the unit on regular household power, DC operates the unit by the battery.

To change to DC
Press [OPERATION] to select ▬ DC.
DC indicator illuminates.

To change to AC
Press [OPERATION] to select ▙ AC/CHARGE.
AC indicator illuminates.
Ensure ▙ AC/CHARGE is selected if the battery is not installed.

Sound is interrupted for about 3 seconds when the power source is changed.

A fully charged battery can operate the unit for a maximum of 6 hours.
The unit automatically switches to AC when battery voltage falls below about 10.5 V.

To adjust the sound balance B

① Press [BALANCE] button to select ▬ ON.
② Turn [BALANCE] control to adjust the left/right sound balance.

When balance adjustments are unneeded
Press [BALANCE] button to select ▙ OFF.

To listen in the monaural mode C

Press [MODE] to select ▬ MONO.
The left and right sounds will be mixed, and the same sounds will be heard from both speakers.

Leave [MODE] in the ▙ STEREO position for normal operation.

To listen through headphones D

① Set the volume control [VOL. (–dB)] to the "∞" position.
② Connect the headphones.
Plug type: 6.3 mm stereo
③ Adjust the volume.

Note

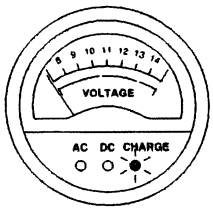
Avoid listening for prolonged periods of time to prevent hearing damage.

To turn on the meter light E

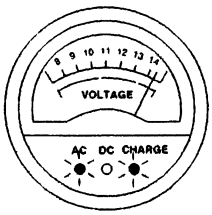
Press [METER LIGHT].
Press again to turn off.

■ The Voltage Meter and Operation Indicator

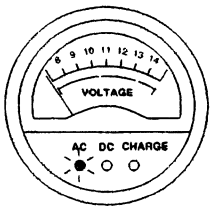
Ⓐ BATTERY



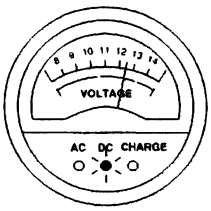
Ⓑ BATTERY



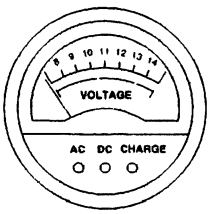
Ⓒ BATTERY



Ⓓ BATTERY



Ⓔ BATTERY



To check the power source and charging condition

The voltage meter and operation indicators allow you to check the power source being used and the charging condition of the battery.

The following apply when MAIN POWER is ON.

Charging Ⓐ
POWER is standby and the battery is recharging.
The needle remains still.

AC source, charging Ⓑ
The unit is operating on AC power and the needle indicates the charge in the battery.
This occurs in the following two situations.
- OPERATION is in the AC/CHARGE position.
- OPERATION is in the DC position but the unit switched to recharging because the battery charge fell below 10.5 V.

Operating on AC Ⓒ
The unit is operating on AC and the battery is fully charged.
(No volts are being used for charging so the needle remains still.)

The same condition occurs if the battery is not installed.

Operating on DC Ⓓ
The unit is operating by battery.
The needle is in the green zone, indicating the charge in the battery.
The unit switches to AC source, charging Ⓑ when the voltage falls below 10.5 V. See "When battery voltage falls below 10.5 V" below.

Not operating or charging Ⓔ
POWER is standby and the battery is fully charged.

When battery voltage falls below 10.5 V

- There is some variation in the needle indication. For this reason, the needle may not exactly indicate 10.5 V when the unit automatically switches from DC to AC.
- It takes approximately 12 hours for the battery to fully charge. The unit cannot be operated on DC during this time. The indicators change to Ⓒ or Ⓔ when charging is complete.

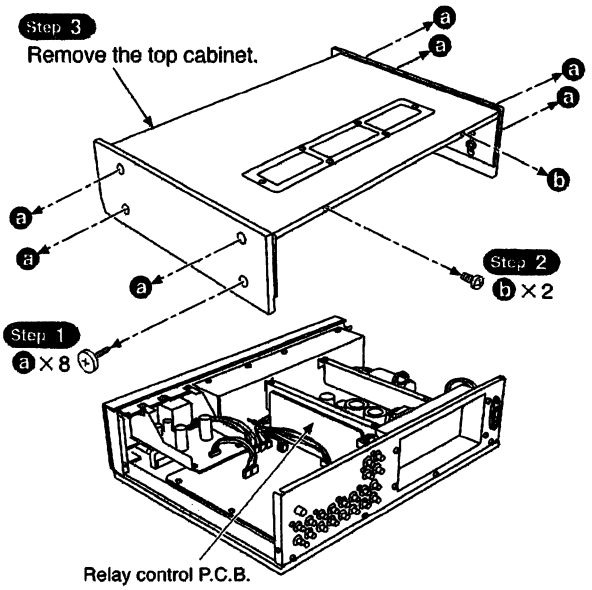
For your reference
- The battery takes approximately 12 hours to charge irrespective of the charge left in the battery when charging starts. If you begin charging before the battery falls below 10.5 V, then you can use DC power before the battery has completely charged.
- When the battery is approaching full charge, the needle fluctuates in the area between 13.5 V and the upper limit (when POWER is ON). This occurs because charging is nearly finished and does not indicate a malfunction.

■ Operation Checks and Component Replacement Procedures

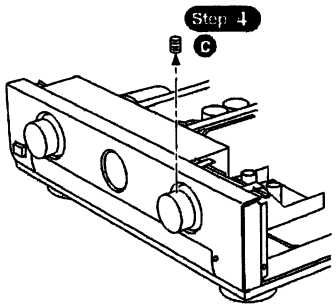
NOTE **1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**

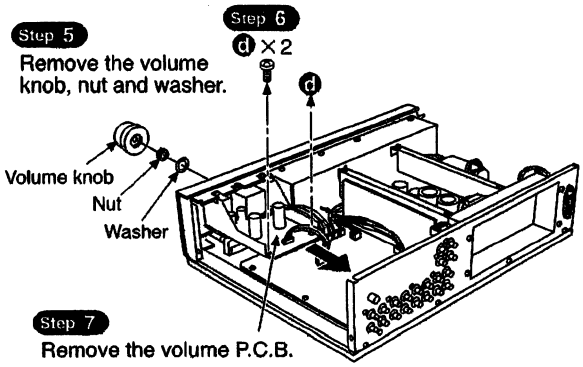
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

1. Checking for the relay control P.C.B., volume P.C.B. and main P.C.B.

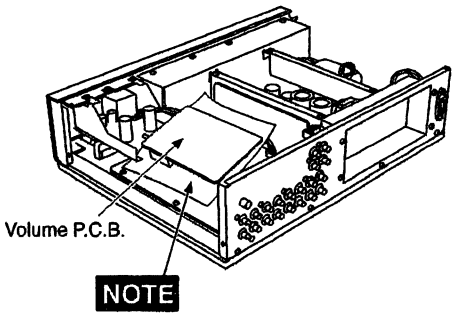


· Check the relay control P.C.B. as shown above.

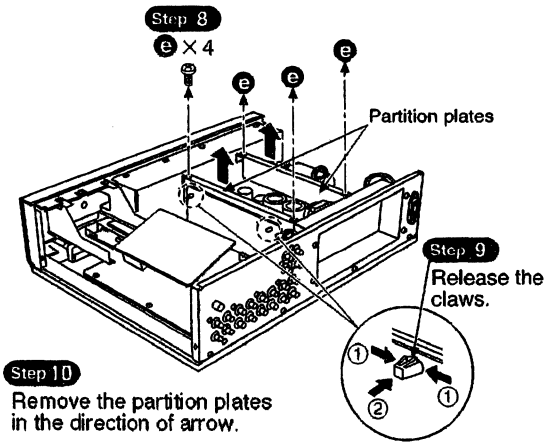


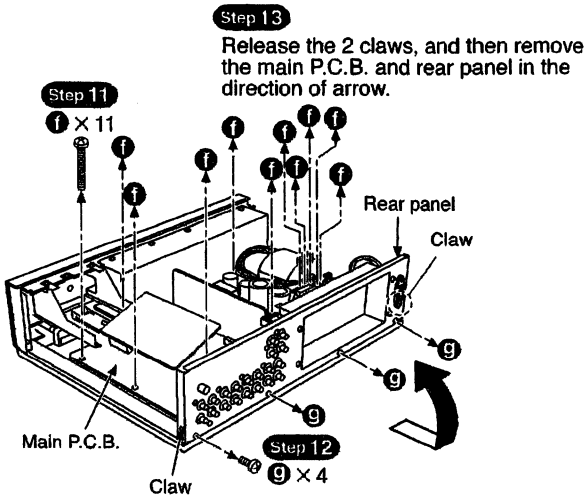


· Check the volume P.C.B. as shown below.

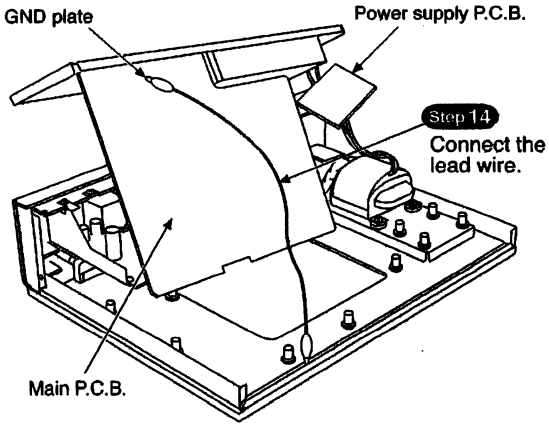


NOTE
Insulate volume P.C.B. with insulation material to avoid short-circuit.



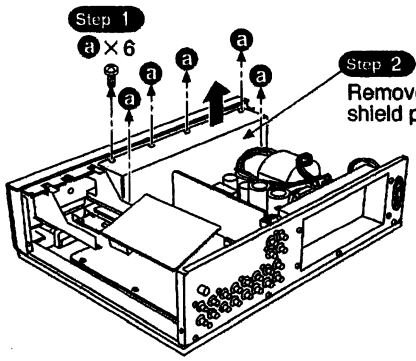


· **Check the main P.C.B. as shown below.**

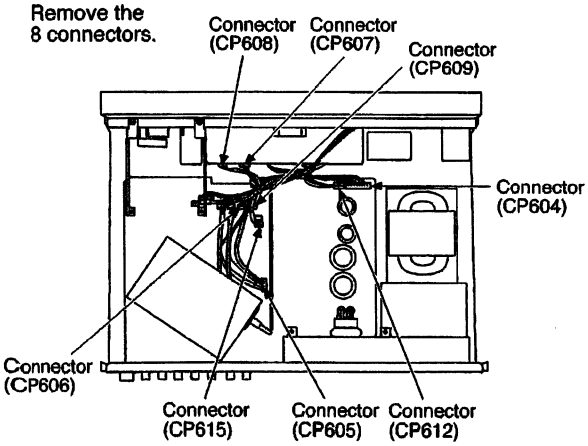


2. Removal of the operation P.C.B.

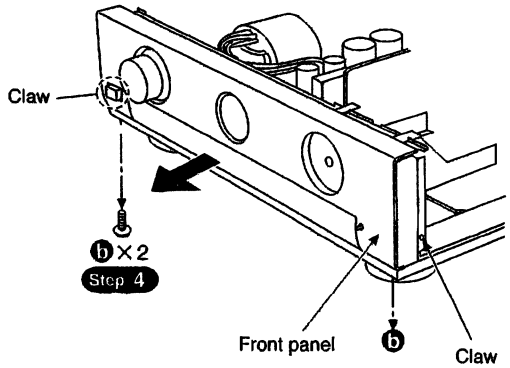
· Follow the Step 1 ~ Step 10 of the item 1 on page 13.

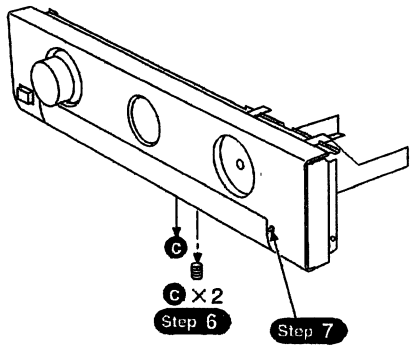


Step 3
Remove the 8 connectors.



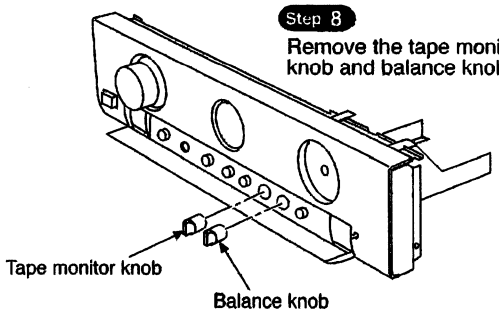
Step 5
Release the 2 claws, and then remove the front panel.



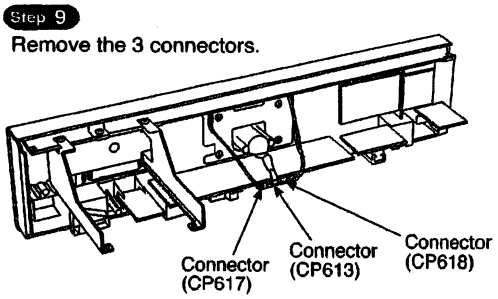


Push the open button.

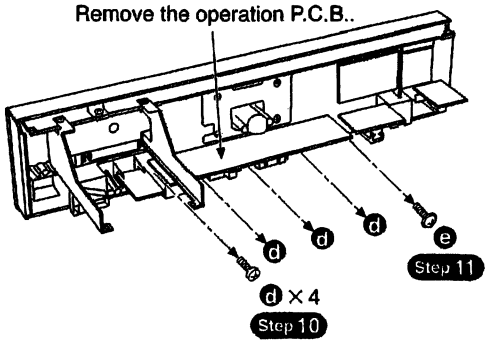
Step 8
Remove the tape monitor knob and balance knob.



Step 9
Remove the 3 connectors.



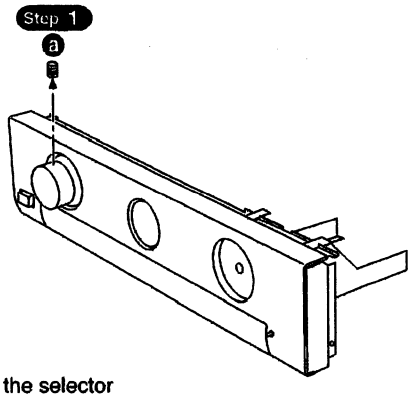
Step 12
Remove the operation P.C.B..



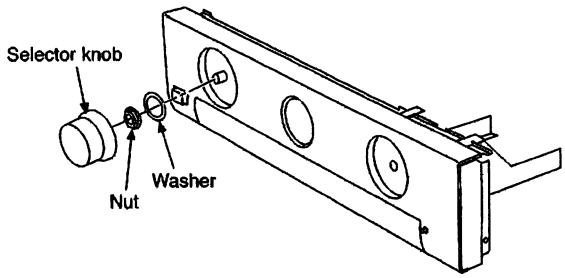
3. Removal of the selector P.C.B.

- Follow the Step 1 ~ Step 10 of the item 1 on page 13.
- Follow the Step 1 ~ Step 5 of the item 2 on page 14.

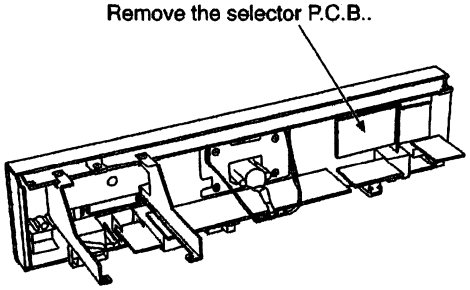
Step 1



Step 2
Remove the selector knob, nut and washer.

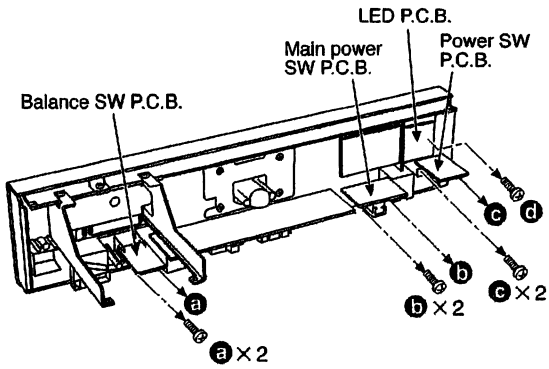


Step 3
Remove the selector P.C.B..



4. Removal of the each P.C.B.

- Follow the Step 1 ~ Step 10 of the item 1 on page 13.
- Follow the Step 1 ~ Step 5 of the item 2 on page 14.



■ **Balance SW P.C.B.**
- Remove the 2 screws (a).

■ **Main power SW P.C.B.**
- Remove the 2 screws (b).

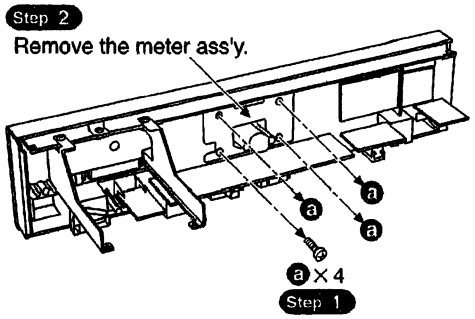
■ **Power SW P.C.B.**
- Remove the 2 screws (c).

■ **LED P.C.B.**
- Remove the screw (d).

5. Replacement for the meter

- Follow the Step 1 ~ Step 10 of the item 1 on page 13.
- Follow the Step 1 ~ Step 5 , Step 9 of the item 2 on page 14.

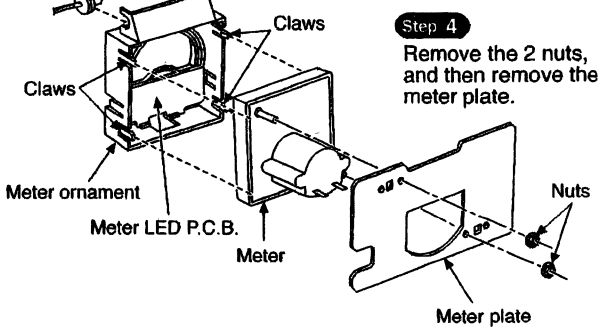
Step 2
Remove the meter ass'y.



Step 3
Remove the lamps.

Step 5
Release the 4 claw, and then remove the meter ornament.

Step 4
Remove the 2 nuts, and then remove the meter plate.



■ Schematic Diagram

	Page
A MAIN CIRCUIT	17 – 25
B LED CIRCUIT	18
C VOLUME CIRCUIT	19
D SELECTOR CIRCUIT	19
E MAIN POWER SW CIRCUIT	19
F POWER SW CIRCUIT	19
G METER LED CIRCUIT	20
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I PRE OUT TERMINAL CIRCUIT	21
J BALANCE SW CIRCUIT	21
K RELAY CONTROL CIRCUIT	21 – 23
L POWER SUPPLY CIRCUIT	25

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:
- **S601** : Input select switch (INPUT SELECTOR)
- **S602** : Power " ▟ STANDBY ⏻/▂ ON" switch (POWER, ▟ STANDBY ⏻/▂ ON)
- **S603** : Main power switch (MAIN POWER, ▟ OFF ▂ ON)
- **S605-1** : AC/DC operation switch (OPERATION)
- **S605-2** : Voltage meter light switch (METER LIGHT)
- **S605-3** : Mode select switch (MODE)
- **S608** : Tape monitor select switch (TAPE MONITOR)
- **S609** : Balance control ON - OFF switch (BALANCE ▟ OFF ▂ ON)
- **VR201-1~4** : Volume control VR (VOLUME)
- **VR202-1~2** : Balance control VR (BALANCE)
- **VR601** : Voltage adjustment VR (VOLTAGE ADJ.)
- **VR602** : Voltage adjustment VR (VOLTAGE ADJ.)
- **VR701** : Battery charge control VR (BATTERY CHARGE CONT.)
- **VR702** : Battery charge control VR (BATTERY CHARGE CONT.)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
  No mark : Power ON

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

- Voltage and signal line

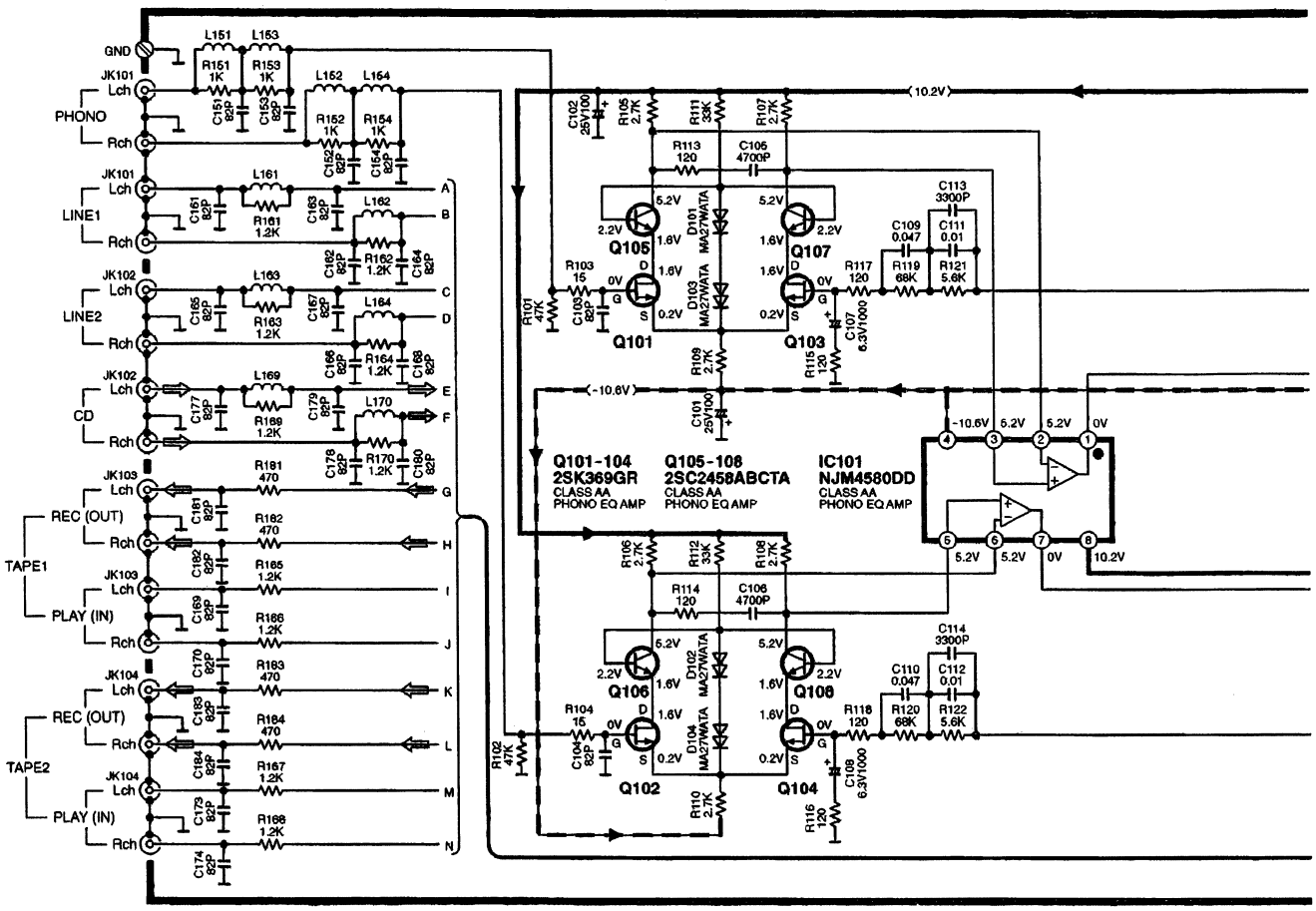
  ▬▶ : Positive voltage line

  ▪▪▶▪▪ : Negative voltage line

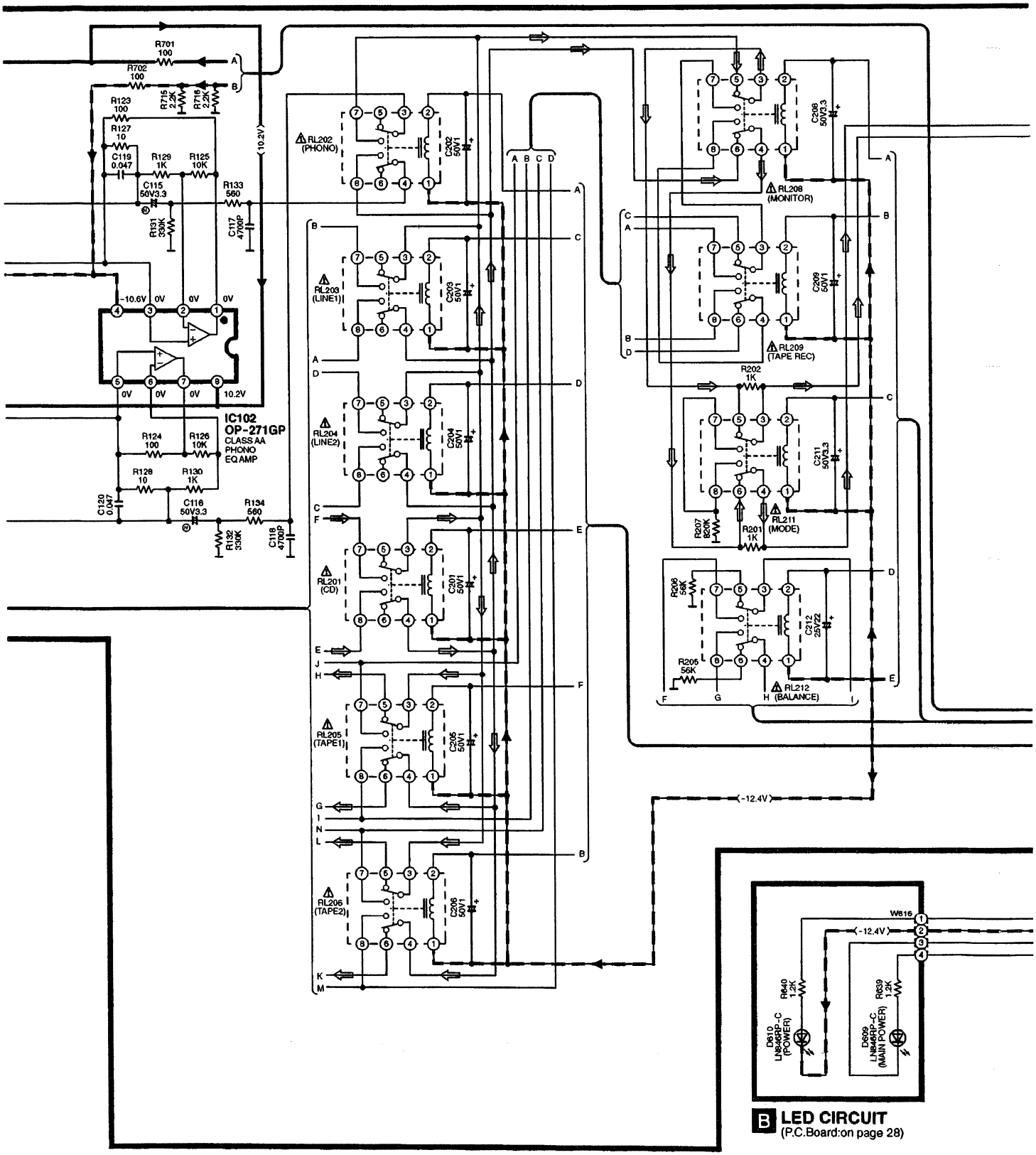
  ⇨ : Source signal line

A MAIN CIRCUIT (P.C.Board:on pages 26,27)

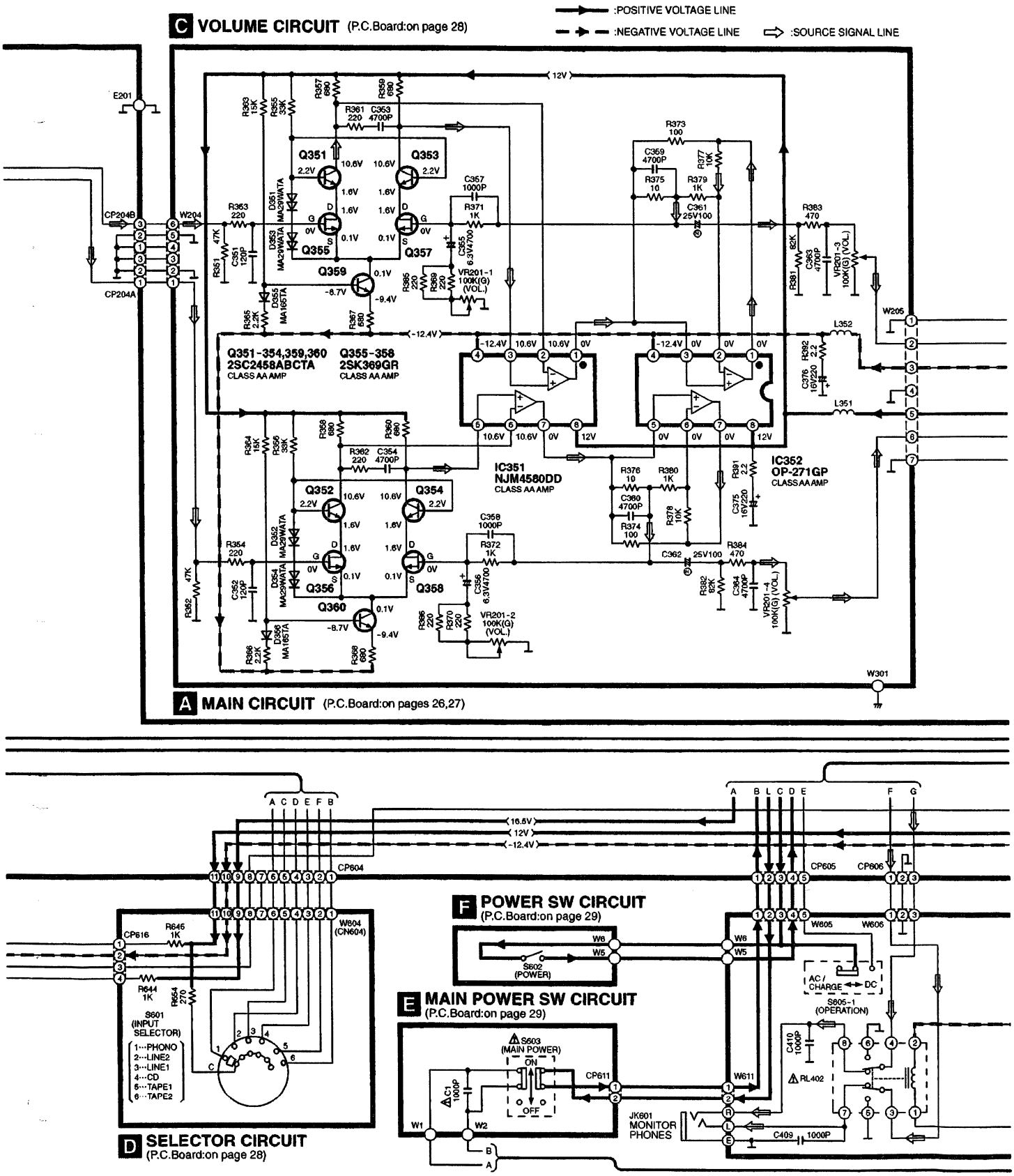
:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:SOURCE SIGNAL LINE

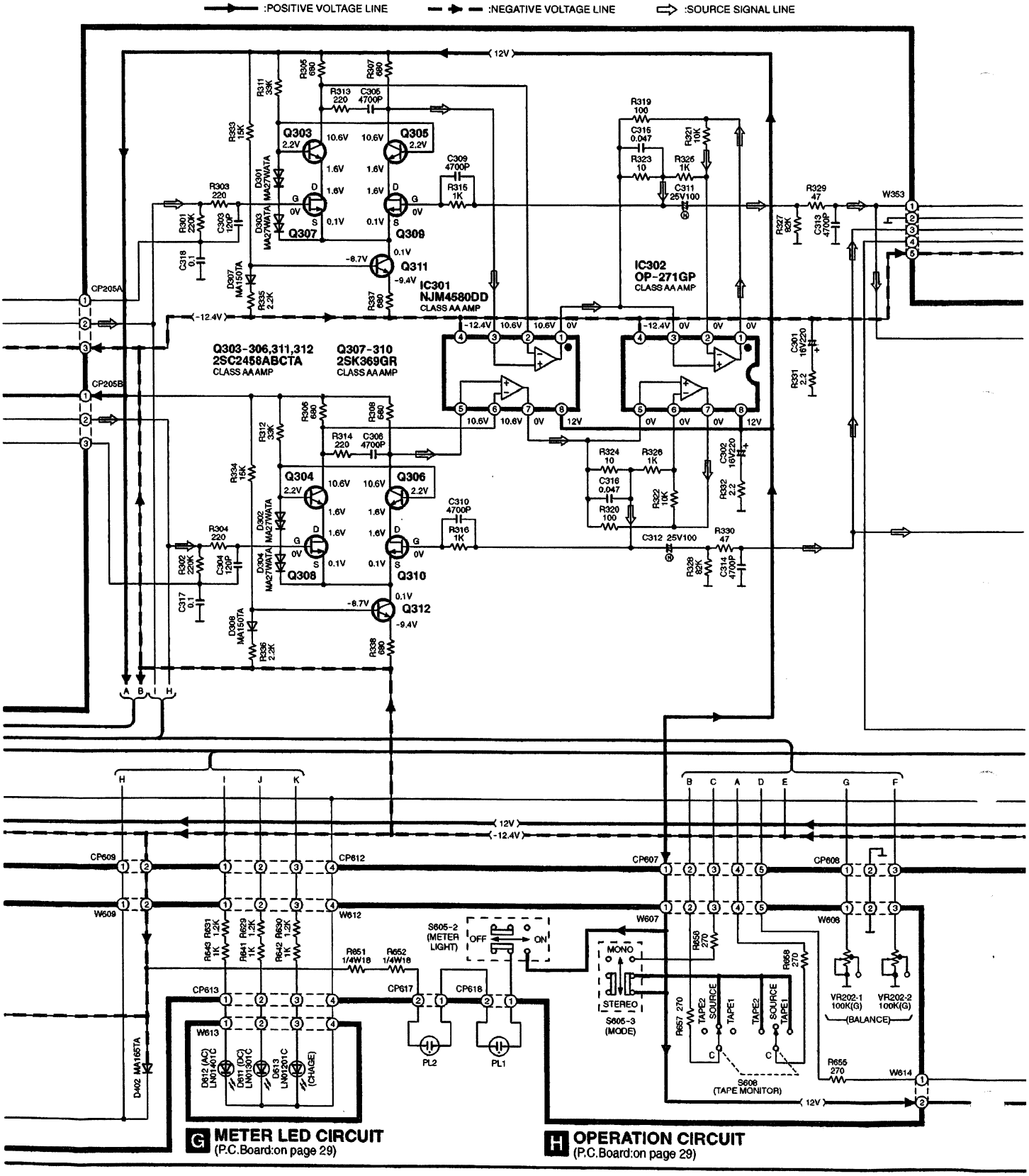


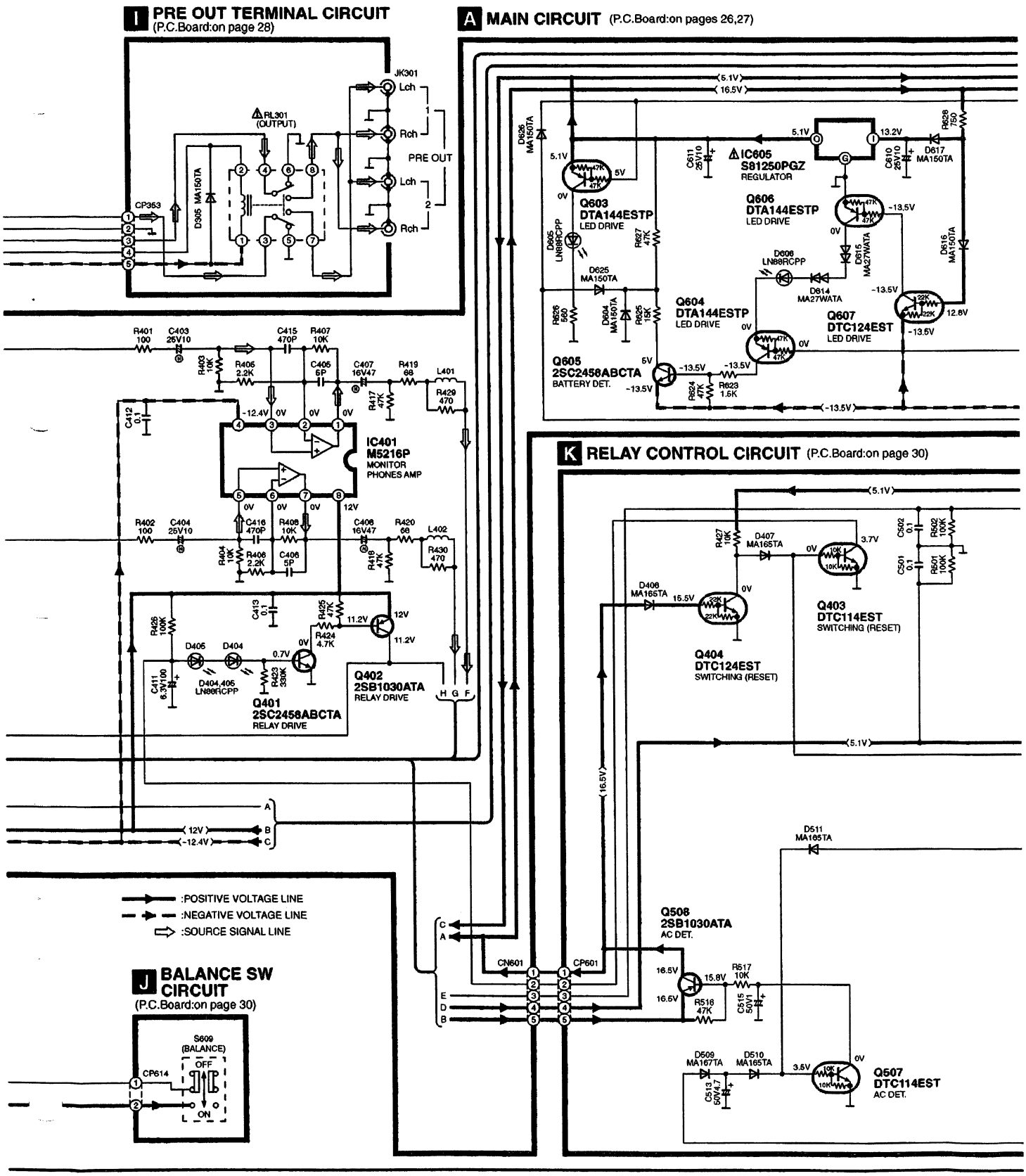
:POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE :SOURCE SIGNAL LINE



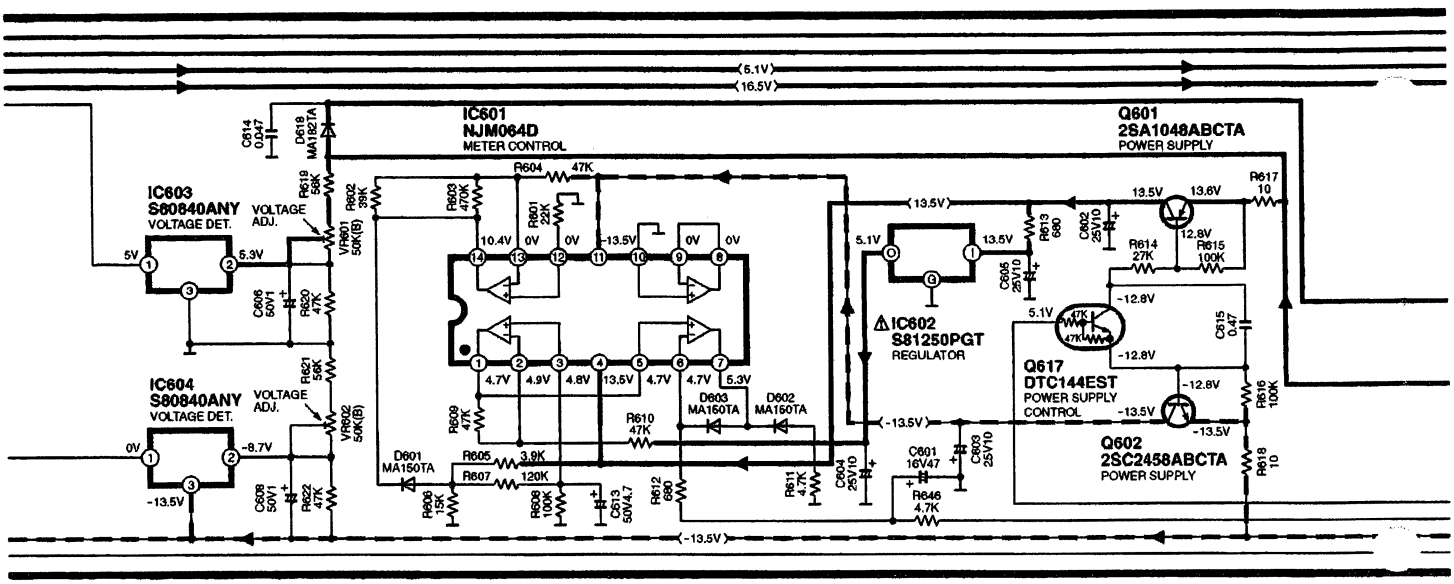
B LED CIRCUIT
(P.C.Board:on page 28)

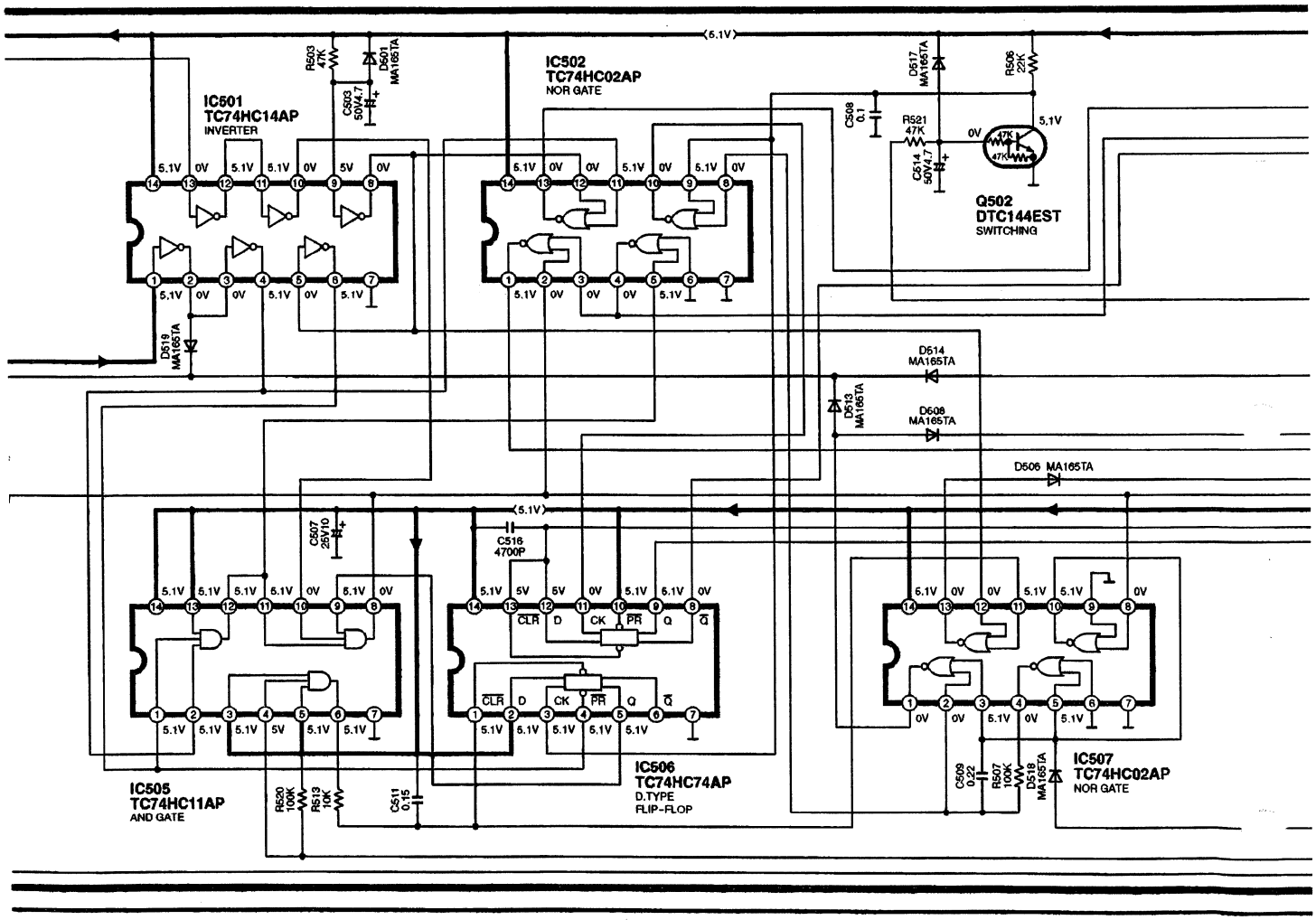

:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:SOURCE SIGNAL LINE
C VOLUME CIRCUIT (P.C.Board:on page 28)
A MAIN CIRCUIT (P.C.Board:on pages 26,27)
Q351-354,359,360 2SC2458ABCTA CLASS AA AMP
Q355-358 2SK369GR CLASS AA AMP
IC351 NJM4580DD CLASS AA AMP
IC352 OP-271GP CLASS AA AMP
F POWER SW CIRCUIT (P.C.Board:on page 29)
E MAIN POWER SW CIRCUIT (P.C.Board:on page 29)
D SELECTOR CIRCUIT (P.C.Board:on page 28)
S601 (INPUT SELECTOR)
1···PHONO
2···LINE2
3···LINE1
4···CD
5···TAPE1
6···TAPE2
S602 (POWER)
S603 (MAIN POWER)
S605-1 (OPERATION)
AC / CHARGE ↔ DC
JK601 MONITOR PHONES
W604 (CN604)
CP604
CP605
CP606
CP616
CP204A
CP204B
W204
W205
W301
W605
W606
W611
CP611
E201
L351
L352
RL402

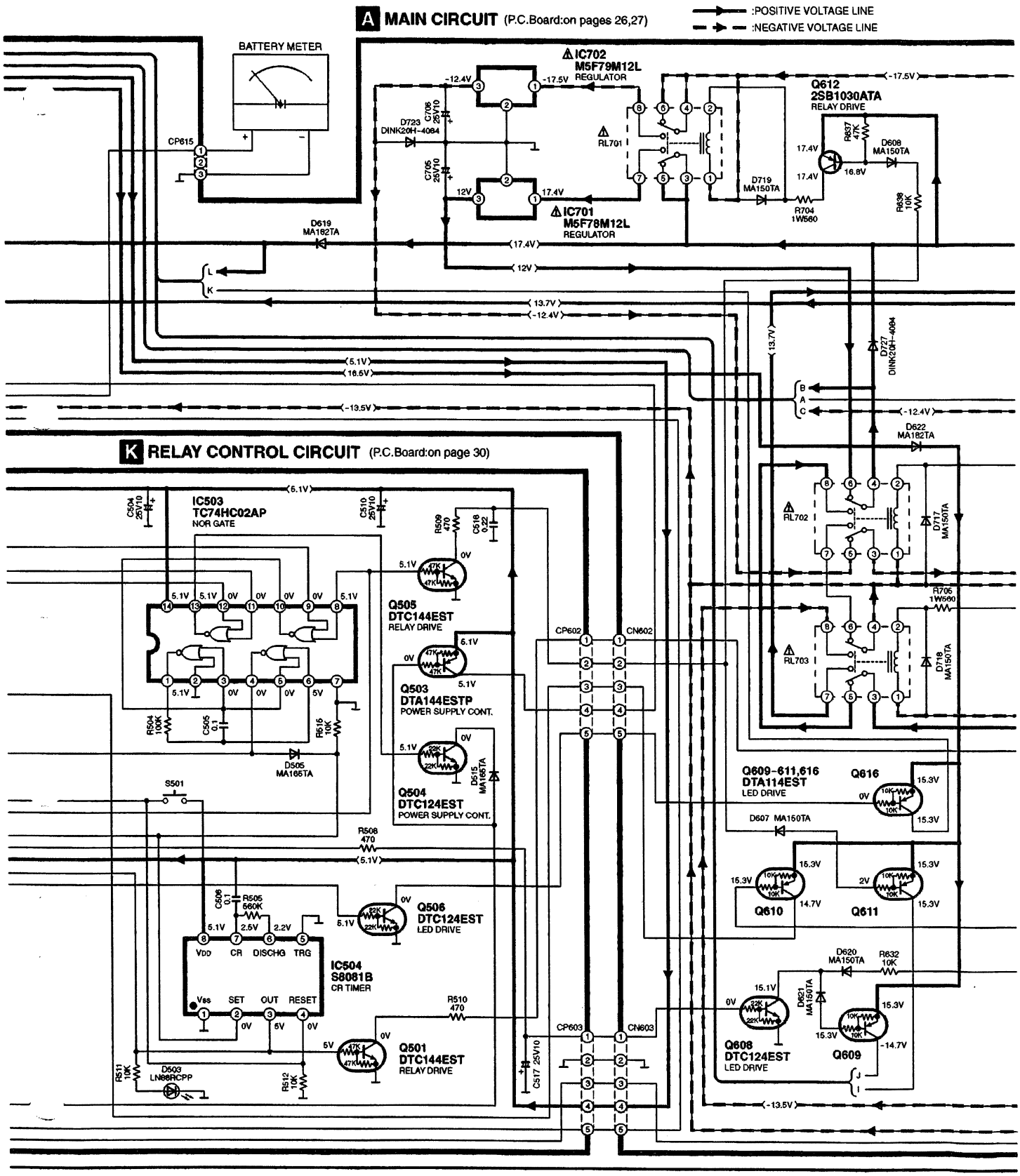

:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:SOURCE SIGNAL LINE
IC301 NJM4580DD CLASS AA AMP
IC302 OP-271GP CLASS AA AMP
Q303-306,311,312 2SC2458ABCTA CLASS AA AMP
Q307-310 2SK369GR CLASS AA AMP
G METER LED CIRCUIT (P.C.Board:on page 29)
H OPERATION CIRCUIT (P.C.Board:on page 29)

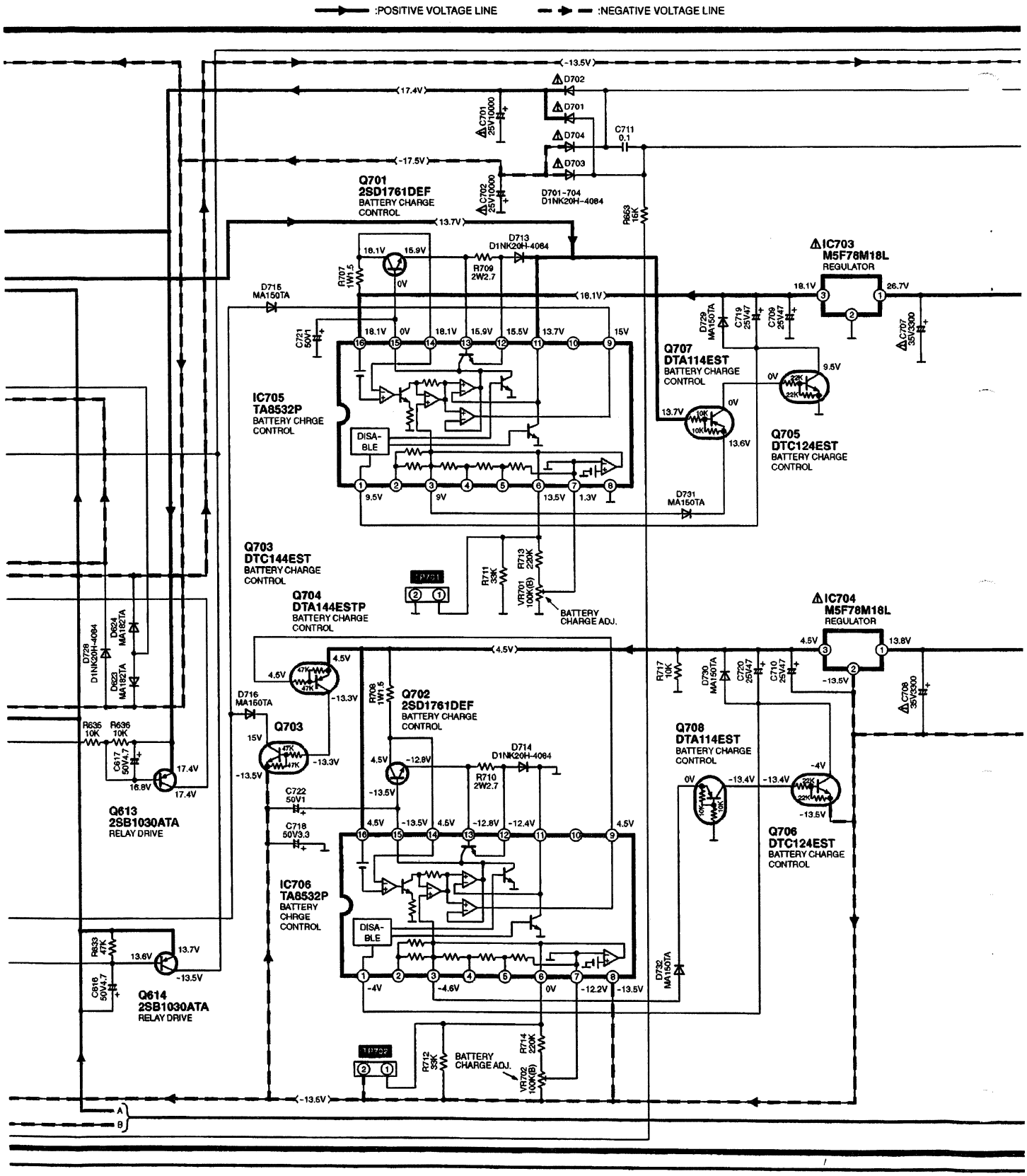

I PRE OUT TERMINAL CIRCUIT
(P.C.Board:on page 28)
A MAIN CIRCUIT (P.C.Board:on pages 26,27)
K RELAY CONTROL CIRCUIT (P.C.Board:on page 30)
J BALANCE SW CIRCUIT
(P.C.Board:on page 30)
JK301
Lch
Rch
PRE OUT
Lch
Rch
RL301
(OUTPUT)
CP353
D305 MA150TA
IC401
M5216P
MONITOR
PHONES AMP
Q401
2SC2458ABCTA
RELAY DRIVE
Q402
2SB1030ATA
RELAY DRIVE
D404,405
LN88RCPP
IC605
S81250PGZ
REGULATOR
Q603
DTA144ESTP
LED DRIVE
Q606
DTA144ESTP
LED DRIVE
Q604
DTA144ESTP
LED DRIVE
Q607
DTC124EST
LED DRIVE
Q605
2SC2458ABCTA
BATTERY DET.
D606
LN88RCPP
D614
MA27WATA
D615
MA27WATA
D625
MA150TA
D626
MA150TA
D616
MA150TA
D617
MA150TA
D407
MA165TA
D406
MA165TA
Q403
DTC114EST
SWITCHING (RESET)
Q404
DTC124EST
SWITCHING (RESET)
D511
MA165TA
Q508
2SB1030ATA
AC DET.
D509
MA167TA
D510
MA165TA
Q507
DTC114EST
AC DET.
CN601
CP601
S609
(BALANCE)
OFF
ON
CP614
:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
:SOURCE SIGNAL LINE

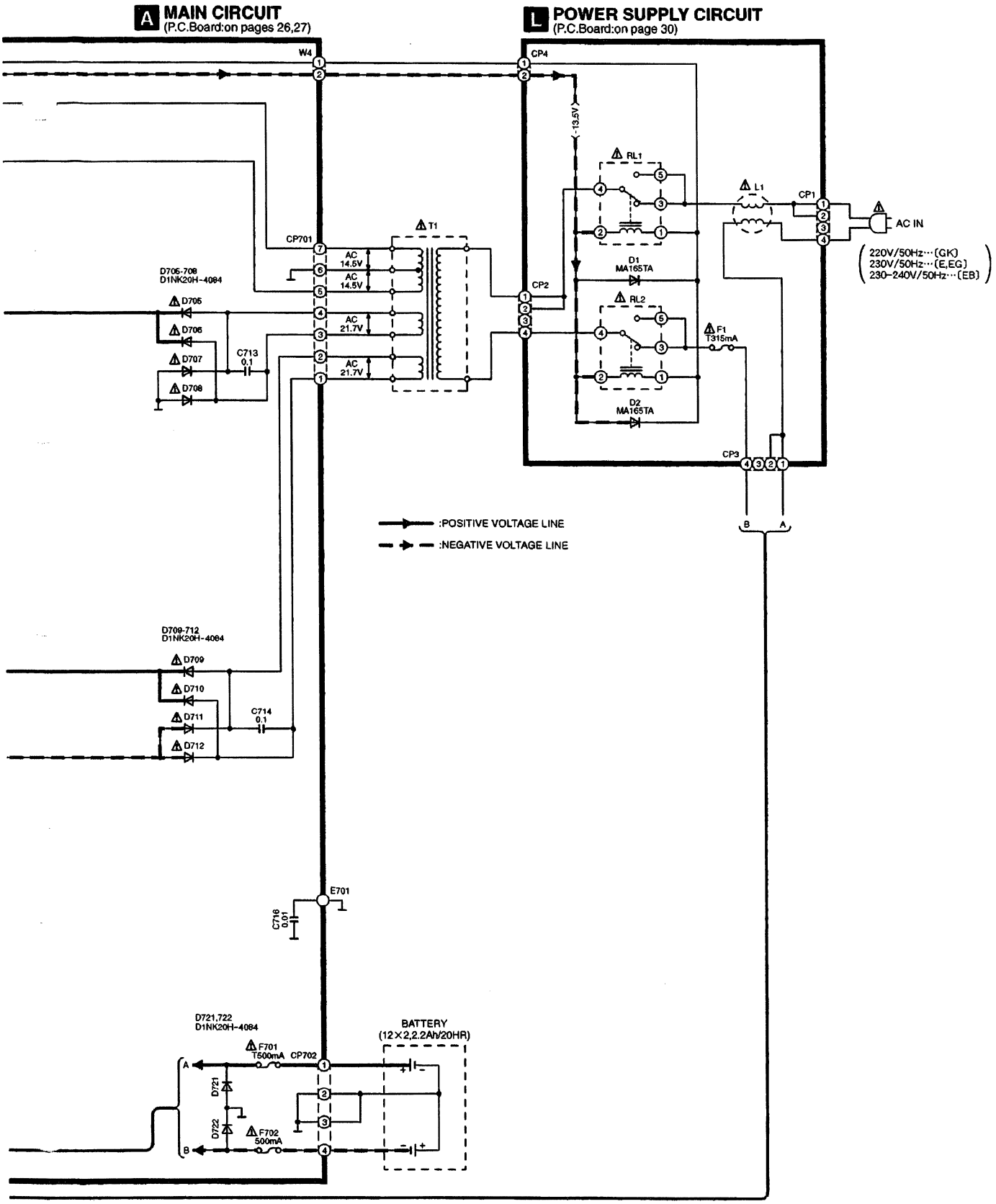
:POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE






A MAIN CIRCUIT (P.C.Board:on pages 26,27)
:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
BATTERY METER
IC702
M5F79M12L
REGULATOR
IC701
M5F78M12L
REGULATOR
Q612
2SB1030ATA
RELAY DRIVE
RL701
D723
DINK20H-4084
D619
MA162TA
D719
MA150TA
D608
MA150TA
R704
1W560
R638
10K
CP615
L
K
-12.4V
-17.5V
12V
17.4V
16.8V
13.7V
5.1V
16.5V
-13.5V
K RELAY CONTROL CIRCUIT (P.C.Board:on page 30)
IC503
TC74HC02AP
NOR GATE
Q505
DTC144EST
RELAY DRIVE
Q503
DTA144ESTP
POWER SUPPLY CONT.
Q504
DTC124EST
POWER SUPPLY CONT.
Q506
DTC124EST
LED DRIVE
IC504
S8081B
CR TIMER
VDD
CR
DISCHG
TRG
Vss
SET
OUT
RESET
Q501
DTC144EST
RELAY DRIVE
D503
LN66RCPP
D505
MA165TA
D515
MA165TA
S501
R505
560K
R508
470
R509
470
R510
470
R511
10K
R512
10K
R504
100K
R616
10K
C505
0.1
C506
0.1
C504
25V10
C510
25V10
C516
0.22
C517
25V10
C705
25V10
C706
25V10
CP602
CN602
CP603
CN603
RL702
RL703
D622
MA182TA
D727
DINK20H-4084
D717
MA150TA
D718
MA150TA
R705
1W560
Q609-611,616
DTA114EST
LED DRIVE
Q616
Q610
Q611
Q608
DTC124EST
LED DRIVE
Q609
D607 MA150TA
D620
MA150TA
D621
MA150TA
R632
10K
R657
47K

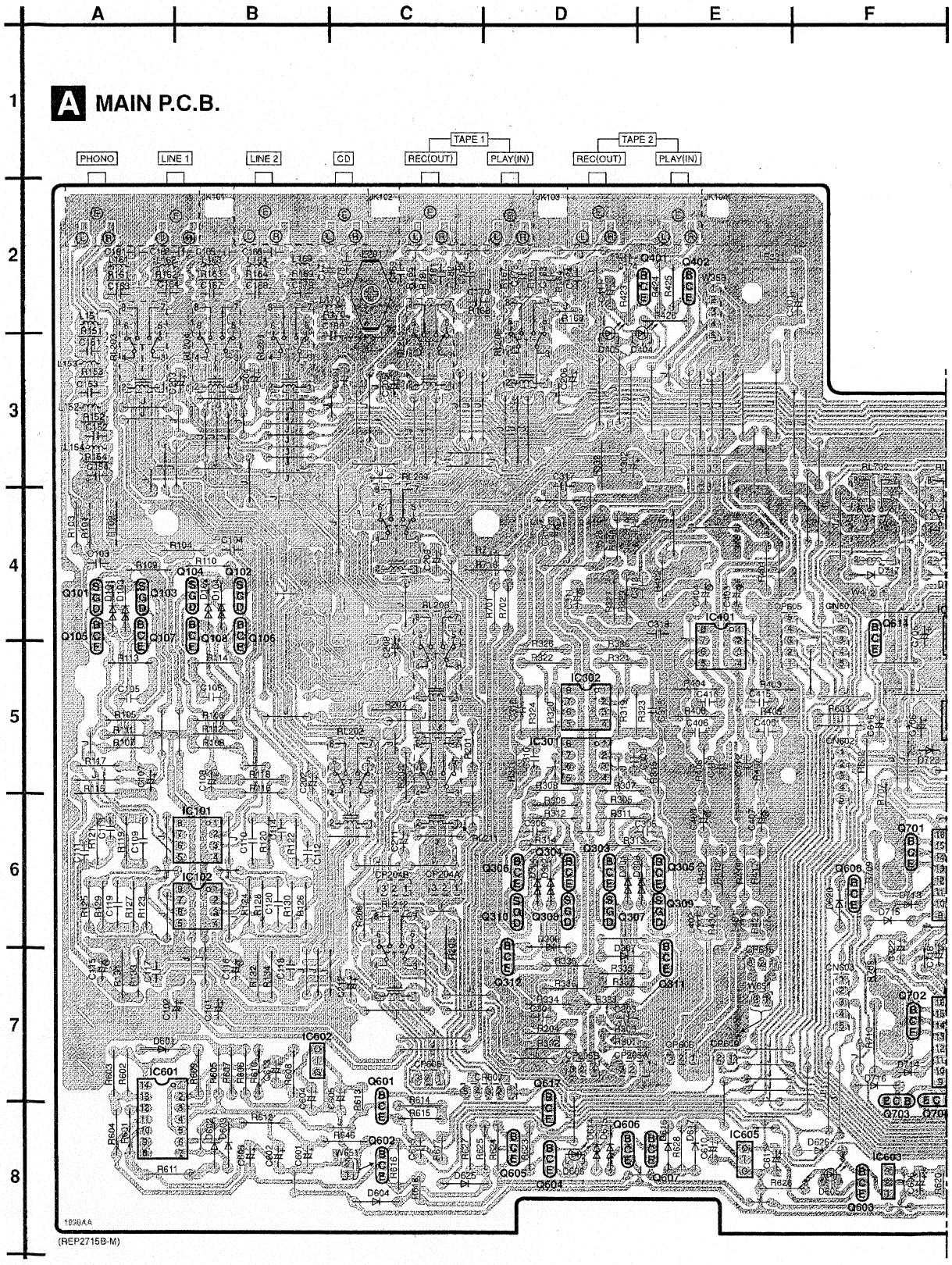

:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
Q701
2SD1761DEF
BATTERY CHARGE
CONTROL
D701-704
D1NK20H-4084
IC703
M5F78M18L
REGULATOR
IC705
TA8532P
BATTERY CHRGE
CONTROL
DISA-
BLE
Q707
DTA114EST
BATTERY CHARGE
CONTROL
Q705
DTC124EST
BATTERY CHARGE
CONTROL
Q703
DTC144EST
BATTERY CHARGE
CONTROL
Q704
DTA144ESTP
BATTERY CHARGE
CONTROL
BATTERY
CHARGE ADJ.
IC704
M5F78M18L
REGULATOR
Q613
2SB1030ATA
RELAY DRIVE
Q702
2SD1761DEF
BATTERY CHARGE
CONTROL
IC706
TA8532P
BATTERY
CHRGE
CONTROL
Q708
DTA114EST
BATTERY CHARGE
CONTROL
Q706
DTC124EST
BATTERY CHARGE
CONTROL
Q614
2SB1030ATA
RELAY DRIVE
BATTERY
CHARGE ADJ.


A MAIN CIRCUIT
(P.C.Board:on pages 26,27)
L POWER SUPPLY CIRCUIT
(P.C.Board:on page 30)
W4
CP4
-13.5V
RL1
L1
CP1
AC IN
220V/50Hz···(GK)
230V/50Hz···(E,EG)
230-240V/50Hz···(EB)
T1
CP701
AC 14.5V
AC 14.5V
AC 21.7V
AC 21.7V
D705-708
D1NK20H-4084
D705
D706
D707
D708
C713 0.1
CP2
D1 MA165TA
RL2
F1 T315mA
D2 MA165TA
CP3
B
A
:POSITIVE VOLTAGE LINE
:NEGATIVE VOLTAGE LINE
D709-712
D1NK20H-4084
D709
D710
D711
D712
C714 0.1
E701
C716 0.01
D721,722
D1NK20H-4084
F701 T500mA
CP702
BATTERY
(12×2,2.2Ah/20HR)
D721
D722
F702 500mA

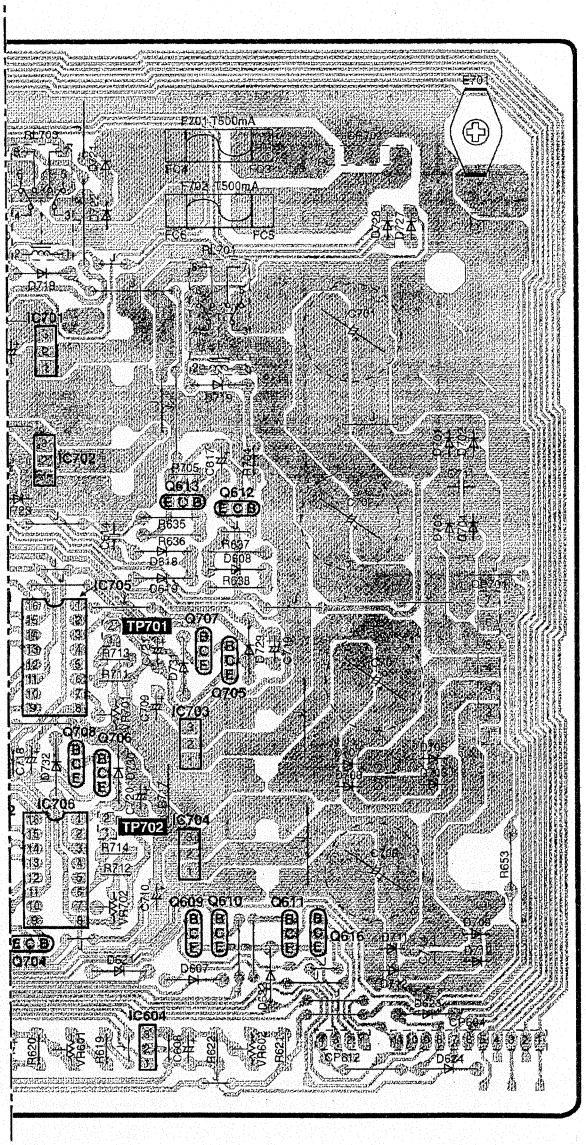
■ Printed Circuit Board Diagram

• This circuit board diagram may be modified at any time with the development of new technology.

A MAIN P.C.B.



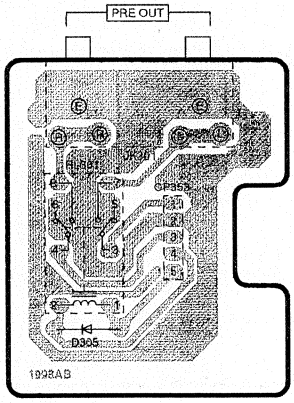
G H I J K L



■ **ELECTRICAL PARTS LOCATION**

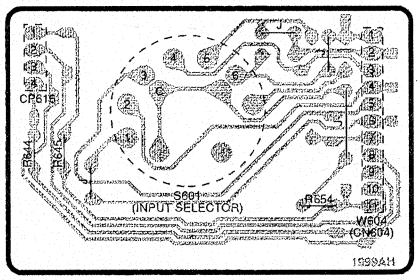
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
IC101	6B	D626	8F	R102	4A	R403	5E	C162	2B
IC102	6B	D701	5I	R103	4A	R404	5E	C163	2A
IC301	5D	D702	5I	R104	4B	R405	5E	C164	2A
IC302	5D	D703	5I	R105	5A	R406	5E	C165	2B
IC401	5E	D704	5I	R106	5B	R407	5E	C166	2B
IC601	8A	D705	7I	R107	5A	R408	5E	C167	2B
IC602	7B	D706	7I	R108	5B	R417	6E	C168	2B
IC603	8F	D707	7H	R109	4A	R418	6E	C169	2C
IC604	8G	D708	7H	R110	4B	R419	6E	C170	2C
IC605	8E	D709	7I	R111	5A	R420	6E	C173	2D
IC701	4G	D710	8I	R112	5B	R423	2D	C174	2D
IC702	5G	D711	8H	R113	5A	R424	2E	C177	2B
IC703	6G	D712	8H	R114	5B	R425	2E	C178	2C
IC704	7G	D713	6F	R115	5A	R426	2E	C179	2B
IC705	6G	D714	7F	R116	5B	R429	6E	C180	3C
IC706	7G	D715	6F	R117	5A	R430	6E	C181	2C
Q101	4A	D716	7F	R118	5B	R601	8A	C182	2C
Q102	4B	D717	4F	R119	6A	R602	7A	C183	2D
Q103	4A	D718	4G	R120	6B	R603	7A	C184	2D
Q104	4B	D719	5H	R121	6A	R604	8A	C201	3C
Q105	4A	D721	4G	R122	6B	R605	7B	C202	5B
Q106	4B	D722	4G	R123	6A	R606	7B	C203	3B
Q107	4A	D723	5F	R124	6B	R607	7B	C204	3B
Q108	4B	D727	4I	R125	6A	R608	7B	C205	3C
Q303	6D	D728	4H	R126	6B	R609	7B	C206	3D
Q304	6D	D729	6H	R127	6A	R610	7B	C208	5C
Q305	6E	D730	7G	R128	6B	R611	8A	C209	4C
Q306	6D	D731	6G	R129	6A	R612	8B	C211	6C
Q307	6D	D732	7G	R130	6B	R613	7C	C212	7C
Q308	6D	VR601	8G	R131	7A	R614	8C	C301	2F
Q309	6E	VR602	8H	R132	7B	R615	8C	C302	3D
Q310	6D	VR701	6G	R133	7A	R616	8C	C303	7D
Q311	7E	VR702	7G	R134	7B	R617	8C	C304	7D
Q312	7D	L151	2A	R151	3A	R618	8C	C305	6E
Q401	2E	L152	3A	R152	3A	R619	8G	C306	6D
Q402	2E	L153	3A	R153	3A	R620	8F	C309	5D
Q601	7C	L154	3A	R154	3A	R621	8H	C310	5D
Q602	8C	L161	2A	R161	2A	R622	8H	C311	4D
Q603	8F	L162	2A	R162	2A	R623	8D	C312	4D
Q604	8D	L163	2B	R163	2B	R624	8D	C313	4E
Q605	8D	L164	2B	R164	2B	R625	8C	C314	4D
Q606	8D	L169	2B	R165	2C	R626	8E	C315	5E
Q607	8E	L170	2B	R166	2C	R627	8C	C316	5D
Q608	6F	L401	6E	R167	2D	R628	8E	C317	3D
Q609	7G	L402	6E	R168	2D	R632	5F	C318	4E
Q610	7H	F701	3H	R169	2B	R633	5F	C403	4E
Q611	7H	F702	4H	R170	2C	R635	5G	C404	4E
Q612	5H	RL201	3B	R181	2C	R636	5G	C405	5E
Q613	5G	RL202	5C	R182	2C	R637	6H	C406	5E
Q614	4F	RL203	2A	R183	2D	R638	6H	C407	6E
Q616	7H	RL204	2B	R184	2D	R646	8C	C408	6E
Q617	8D	RL205	2C	R201	5C	R653	7I	C411	2D
Q701	6F	RL206	3D	R202	5C	R701	4D	C412	5E
Q702	7F	RL208	4C	R205	7C	R702	4D	C413	5E
Q703	7F	RL209	4C	R206	6C	R704	5H	C415	5E
Q704	8G	RL211	6C	R207	5C	R705	5G	C416	5E
Q705	6H	RL212	6C	R301	7D	R707	6F	C601	8B
Q706	7G	RL701	4H	R302	7D	R708	7F	C602	8B
Q707	6H	RL702	3F	R303	7D	R709	6F	C603	8B
Q708	7G	RL703	4G	R304	7D	R710	7F	C604	7B
D101	4A	CN601	4F	R305	6D	R711	6G	C605	7C
D102	4B	CN602	5F	R306	6D	R712	7G	C606	8F
D103	4A	CN603	7F	R307	5D	R713	6G	C608	8G
D104	4B	JK101	2A	R308	5D	R714	7G	C610	8E
D301	6D	JK102	2C	R311	6D	R715	4D	C611	8E
D302	6D	JK103	2D	R312	6D	R716	4D	C613	7B
D303	6E	JK104	2E	R313	6D	R717	7G	C614	5G
D304	6D	E201	2C	R314	6D	C101	7B	C615	8C
D307	7D	E701	3I	R315	5E	C102	7A	C616	5F
D308	7D	FC3	4H	R316	5D	C103	4A	C617	5H
D404	3E	FC4	4G	R319	5D	C104	4B	C701	4H
D405	3D	FC5	4H	R320	5D	C105	5A	C702	5H
D601	7A	FC6	4G	R321	5D	C106	5B	C705	4F
D602	8B	CP204A	6C	R322	5D	C107	5A	C706	5F
D603	8B	CP204B	6C	R323	5D	C108	5B	C707	6H
D604	8C	CP205A	7D	R324	5D	C109	6A	C708	7H
D605	8F	CP205B	7D	R325	5D	C110	6B	C709	6G
D606	8D	CP604	8I	R326	5D	C111	6A	C710	7G
D607	8G	CP605	4E	R327	4D	C112	6B	C711	5I
D608	6H	CP606	7E	R328	4D	C113	6A	C713	7H
D614	8D	CP607	7D	R329	4D	C114	6B	C714	8I
D615	8D	CP608	7C	R330	4D	C115	7A	C716	4I
D616	8E	CP609	7E	R331	2E	C116	7B	C718	7F
D617	8E	CP612	8H	R332	3D	C117	7A	C719	6H
D618	6G	CP615	7E	R333	7D	C118	7B	C720	7G
D619	6G	CP701	6I	R334	7D	C119	6A	C721	6G
D620	6F	CP702	3H	R335	7D	C120	6B	C722	7F
D621	8G	W4	4F	R336	7D	C151	3A	TP701	6G
D622	8H	W353	2E	R337	7D	C152	3A	TP702	7G
D623	8I	W651	7E	R338	7D	C153	3A		
D624	8I	W651	8C	R401	4E	C154	3A		
D625	8C	R101	4A	R402	4E	C161	2A		

I PRE OUT TERMINAL P.C.B.



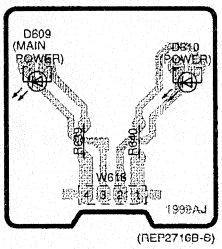
(REP2715B-M)

D SELECTOR P.C.B.



(REP2716B-S)

B LED P.C.B.

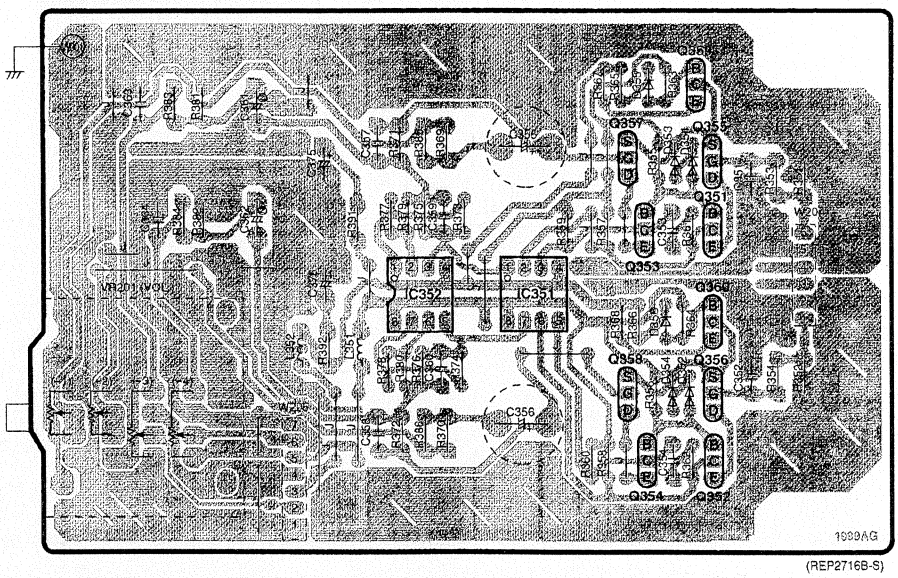


(REP2716B-S)

■ ELECTRICAL PARTS LOCATION

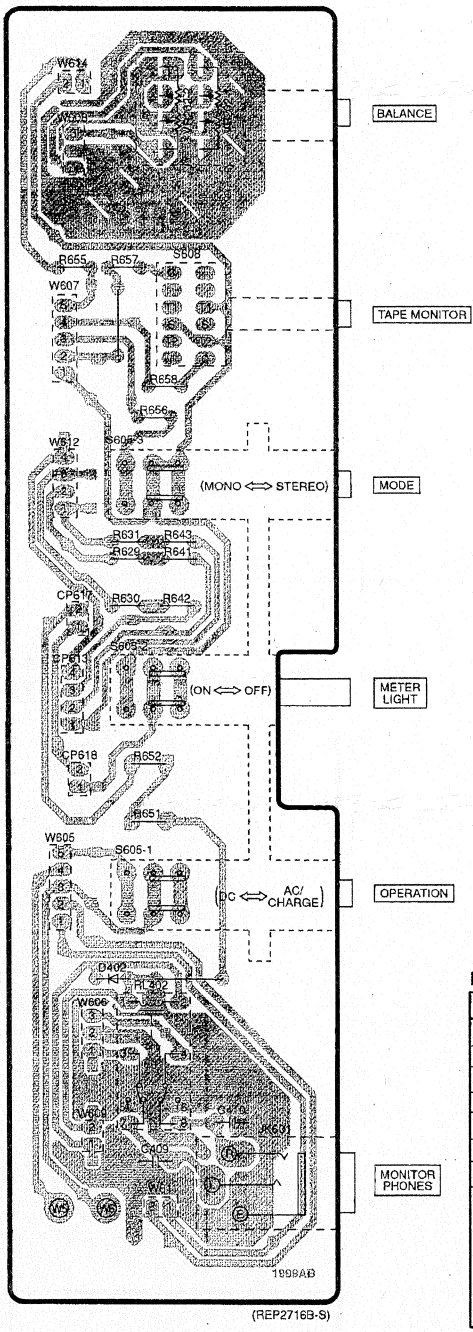
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
I PRE OUT TERMINAL P.C.B.									
D305	3A	RL301	2A	JK301	2B	CP353	2B		
B LED P.C.B.									
D609	4A	D610	4B	W616	5B	R639	4B	R640	4B
D SELECTOR P.C.B.									
S601 W604	2E 2F	CP616	1D	R644	2D	R645	2D	R654	2E
C VOLUME P.C.B.									
IC351	7D	D355	6D	R359	7D	R375	7C	C353	7D
IC352	7C	D356	7D	R360	8D	R376	7C	C354	8D
Q351	7D	VR201	7A	R361	7D	R377	7C	C355	6D
Q352	8D	L351	7C	R362	8D	R378	7C	C356	8C
Q353	7D	L352	7B	R363	6D	R379	7C	C357	6C
Q354	8D	W204	7E	R364	7D	R380	7C	C358	8C
Q355	6D	W205	8B	R365	6D	R381	6B	C359	7C
Q356	8D	W301	6A	R366	7D	R382	7B	C360	7C
Q357	6D	R351	6E	R367	6D	R383	6B	C361	6B
Q358	7D	R352	7E	R368	7D	R384	7B	C362	7B
Q359	6D	R353	6E	R369	6C	R385	6C	C363	6B
Q360	7D	R354	7E	R370	8C	R386	8C	C364	7B
D351	6D	R355	6D	R371	6C	R391	7C	C375	6B
D352	8D	R356	8D	R372	8C	R392	7C	C376	7B
D353	6D	R357	7D	R373	7C	C351	6E		
D354	8D	R358	8D	R374	7C	C352	7E		

C VOLUME P.C.B.



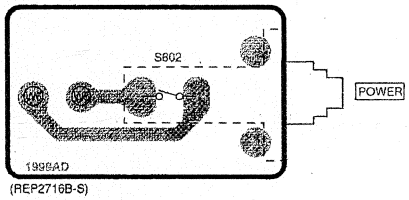
(REP2716B-S)

H OPERATION P.C.B.



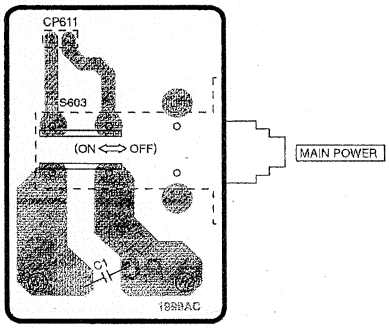
(REP2716B-S)

F POWER SW P.C.B.



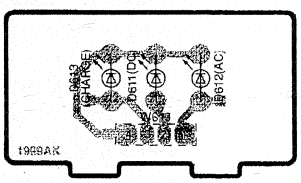
(REP2716B-S)

E MAIN POWER SW P.C.B.



(REP2716B-S)

G METER LED P.C.B.

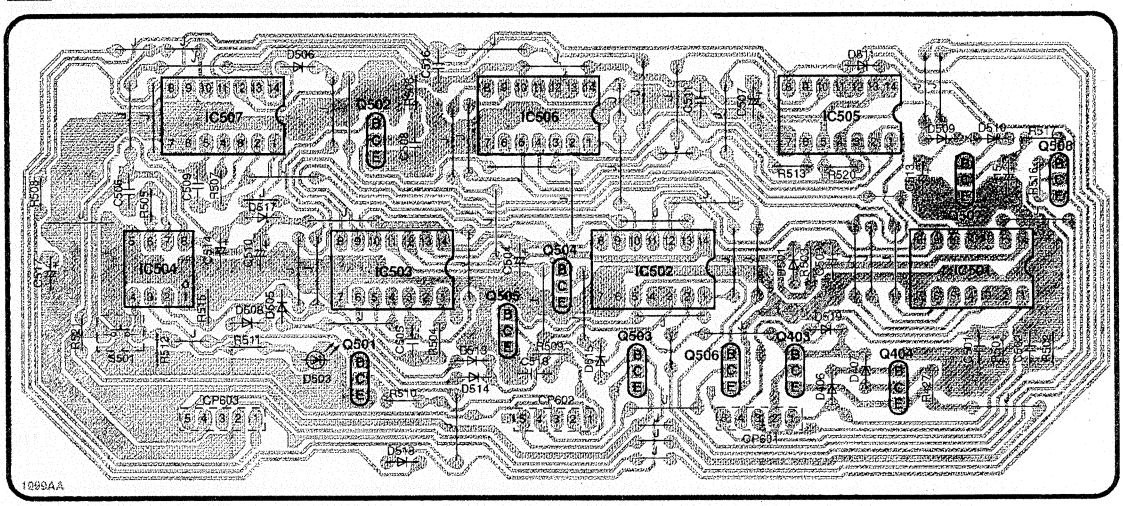


(REP2716B-S)

■ ELECTRICAL PARTS LOCATION

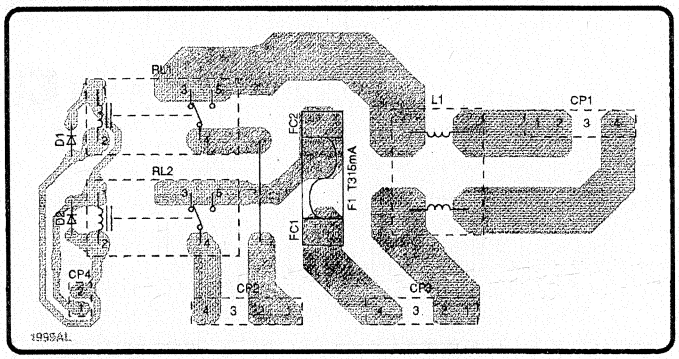
Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
F POWER SWITCH P.C.B.									
S602	1E	W5	2D	W6	2D				
E MAIN POWER SWICTH P.C.B.									
S603	3D	CP611	3D	W1	4D	W2	4E	C1	4D
G METER LED P.C.B.									
D611	5E	D612	5E	D613	5D	W613	5E		
H OPERATION P.C.B.									
D402	6A	S608	3B	W608	2A	R631	4A	R657	3A
CP613	5A	VR202-1	2B	W609	7A	R641	4B	R658	3B
CP617	4A	VR202-2	2B	W611	7B	R642	4B	C409	7A
CP618	5A	W5	7A	W612	4A	R643	4B	C410	7B
RL402	6A	W6	7A	W614	2A	R651	5A		
S605-1	6B	W605	6A	JK601	7B	R652	5A		
S605-2	5B	W606	6A	R629	4A	R655	3A		
S605-3	4B	W607	3A	R630	4A	R656	3A		

K RELAY CONTROL P.C.B.



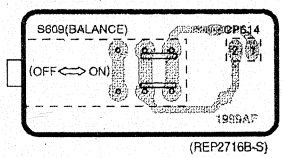
(REP2716B-S)

L POWER SUPPLY P.C.B.



(REP2716B-S)

J BALANCE SW P.C.B.



(REP2716B-S)

■ ELECTRICAL PARTS LOCATION

Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.	Ref. No.	Lo. No.
J BALANCE SW P.C.B.											
S609	5E	CP614	5F								
K RELAY CONTROL P.C.B.											
IC501	2F	Q505	3C	D511	1E	R502	3F	R516	2F	C510	2B
IC502	2D	Q506	3D	D513	3C	R503	2E	R517	2F	C511	2D
IC503	2C	Q507	2F	D514	3C	R504	3C	R520	2E	C513	2E
IC504	2B	Q508	2F	D515	3D	R505	2B	R521	3A	C514	2B
IC505	2E	D406	3E	D517	2B	R506	2C	C501	3F	C515	2F
IC506	2D	D407	3E	D518	3C	R507	2B	C502	3F	C516	1C
IC507	2B	D501	2E	D519	3E	R508	2A	C503	2E	C517	2A
Q403	3E	D503	3B	S501	3A	R509	3D	C504	2C	C518	3C
Q404	3E	D505	3B	CP601	3E	R510	3C	C505	3C		
Q501	3C	D506	1B	CP602	3D	R511	3B	C506	2A		
Q502	2C	D508	3B	CP603	3B	R512	3B	C507	2E		
Q503	3D	D509	2F	R427	3F	R513	2E	C508	2C		
Q504	2D	D510	2F	R501	3F	R515	3B	C509	2B		
L POWER SUPPLY P.C.B.											
D1	5A	L1	5C	RL1	5A	FC1	5B	CP1	5D	CP3	6C
D2	5A	F1	5B	RL2	5A	FC2	5B	CP2	6B	CP4	6A

■ Type Illustration of IC's, Transistors and Diodes

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 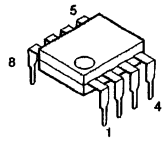 </td>
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 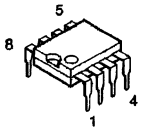 </td>
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 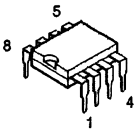 </td>
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 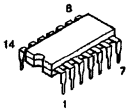 </td>
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 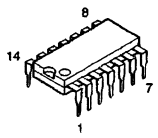 </td>
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 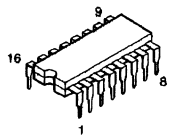 </td>
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 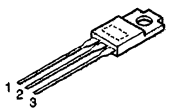 </td>
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 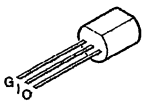 </td>
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 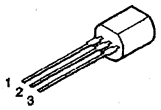 </td>
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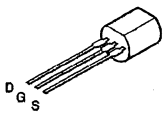
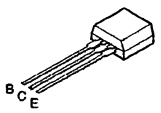
  </td>
<td colspan="2"> 
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DTC124EST
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 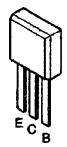 </td>
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 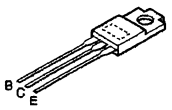 </td>
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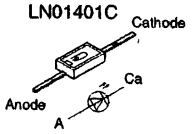
LN01401C
  </td>
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 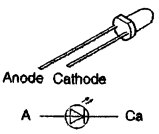 </td>
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 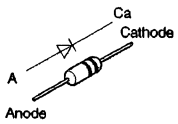 </td>
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 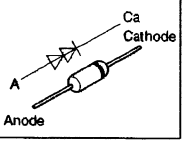 </td>
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 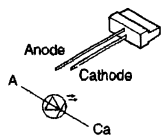 </td>
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 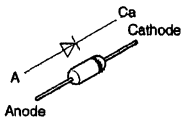 </td>
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 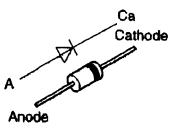 </td>
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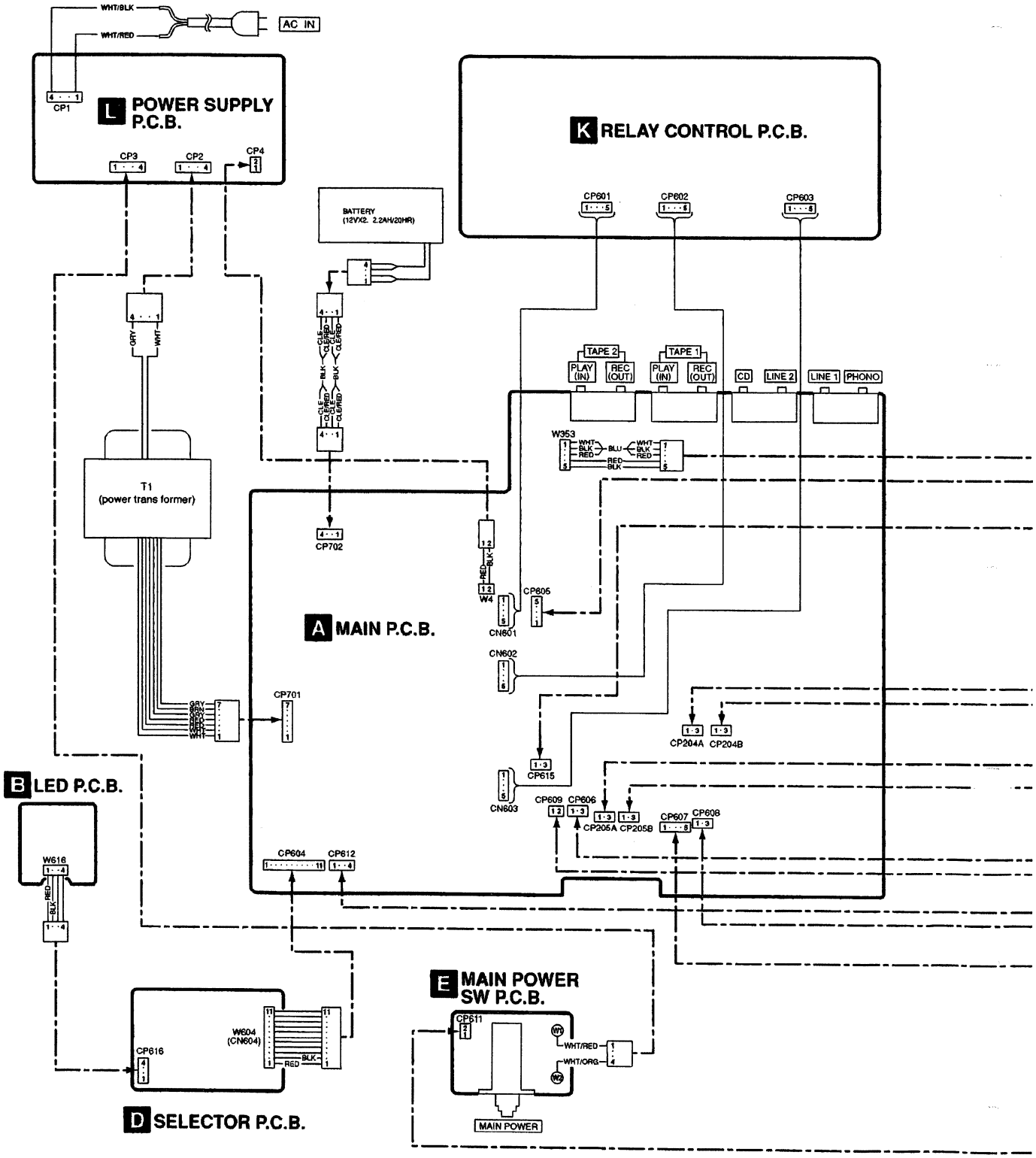
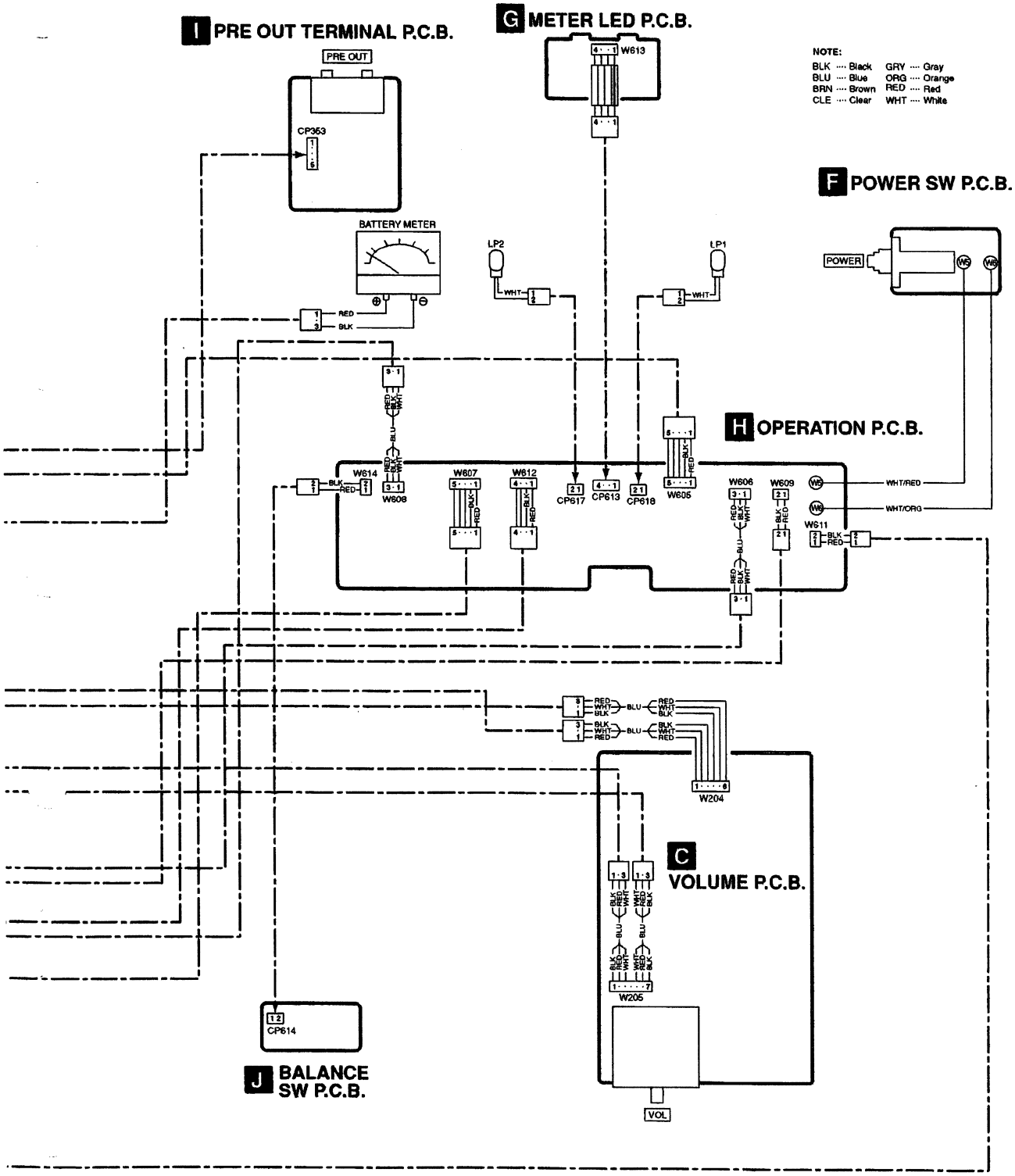
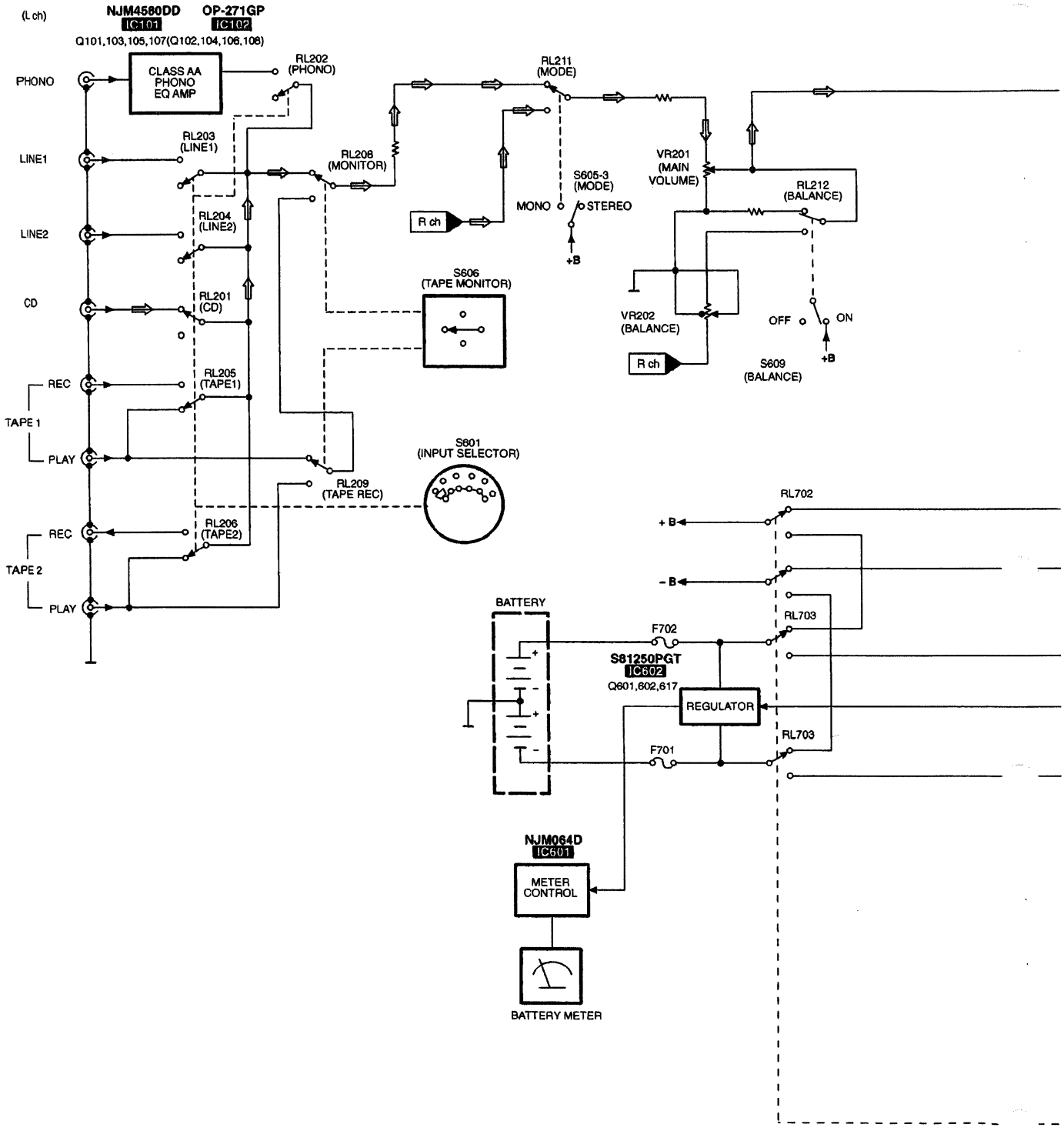
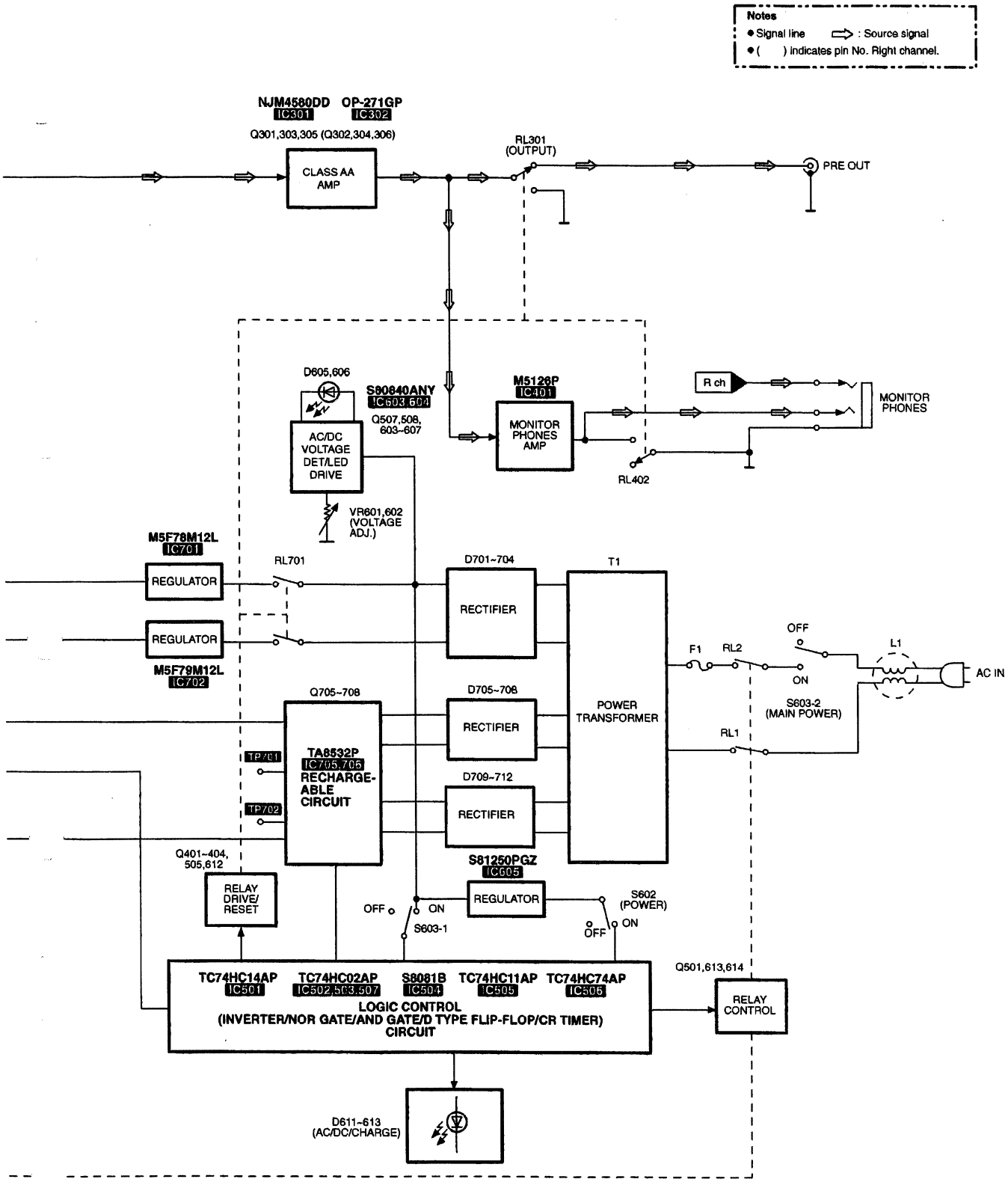
■ Wiring Connection Diagram




I PRE OUT TERMINAL P.C.B.
PRE OUT
CP353
G METER LED P.C.B.
W613
NOTE:
BLK ···· Black
BLU ···· Blue
BRN ···· Brown
CLE ···· Clear
GRY ···· Gray
ORG ···· Orange
RED ···· Red
WHT ···· White
F POWER SW P.C.B.
POWER
BATTERY METER
LP2
LP1
WHT
RED
BLK
H OPERATION P.C.B.
W614
W608
W607
W612
CP617
CP613
CP618
W605
W606
W609
W611
WHT/RED
WHT/ORG
W204
C VOLUME P.C.B.
W205
VOL
CP614
J BALANCE SW P.C.B.

■ Block Diagram




Notes
● Signal line ⇨ : Source signal
● ( ) indicates pin No. Right channel.
NJM4580DD IC301
OP-271GP IC302
Q301,303,305 (Q302,304,306)
CLASS AA AMP
RL301 (OUTPUT)
PRE OUT
D605,606
S80840ANY IC603,604
Q507,508, 603~607
AC/DC VOLTAGE DET/LED DRIVE
VR601,602 (VOLTAGE ADJ.)
M5126P IC401
MONITOR PHONES AMP
R ch
MONITOR PHONES
RL402
M5F78M12L IC701
REGULATOR
RL701
D701~704
RECTIFIER
T1
REGULATOR
M5F79M12L IC702
Q705~708
D705~708
RECTIFIER
TA8532P IC705,706 RECHARGE-ABLE CIRCUIT
TP701
TP702
D709~712
RECTIFIER
POWER TRANSFORMER
OFF
F1
RL2
ON
L1
AC IN
S603-2 (MAIN POWER)
RL1
Q401~404, 505,612
RELAY DRIVE/ RESET
S81250PGZ IC605
REGULATOR
OFF
ON
S603-1
S602 (POWER)
OFF
ON
Q501,613,614
RELAY CONTROL
TC74HC14AP IC501
TC74HC02AP IC502,503,507
S8081B IC504
TC74HC11AP IC505
TC74HC74AP IC506
LOGIC CONTROL (INVERTER/NOR GATE/AND GATE/D TYPE FLIP-FLOP/CR TIMER) CIRCUIT
D611~613 (AC/DC/CHARGE)

■ Measurements and Adjustments

Measuring Instruments and Special Tools

- DC power supply
- DC electronic voltmeter (DC EVM)
- Resistance (180 , 3W) ×2
- Diode ×2

Prepare for Adjustment

1. Disconnect the connector of rechargeble battery that is connected CP702 on MAIN P.C.B..
2. Connect the DC power supply as shown in Fig.1.
3. Apply **±DC 10.5 V ± 0.1 V.**
4. Adjust **VR601** and **VR602** to mechanically minimum position.
5. Turn on the MAIN POWER.

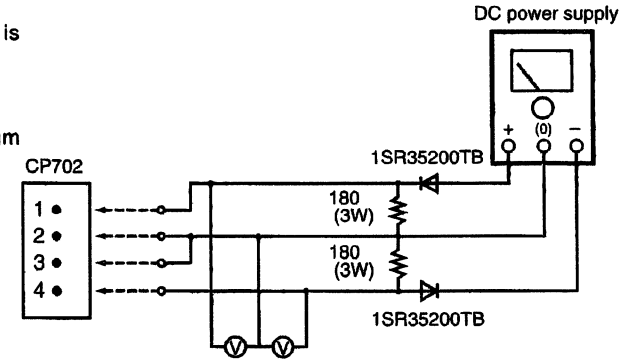


Fig. 1

Charge Voltage Adjustment

1. Connect the measuring instruments as shown in Fig. 2.
2. Adjust **VR701** to **DC +13.65 ± 0.1 V.** Then adjust **VR702** to **DC −13.65 ± 0.1V.**

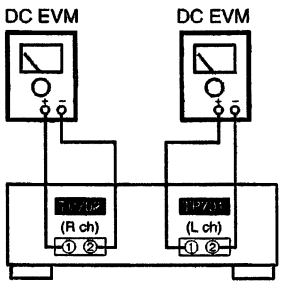


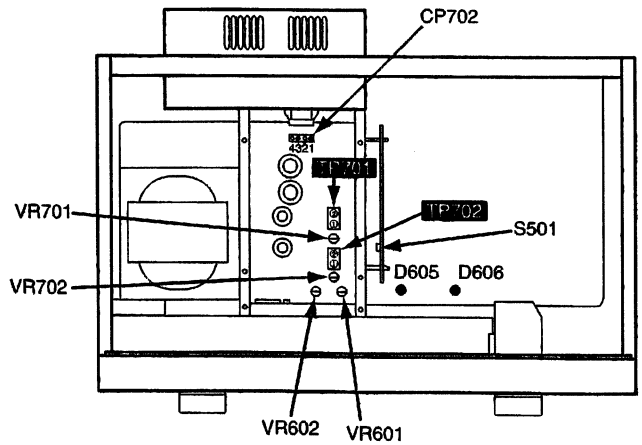
Fig. 2

DC/AC Auto Change Voltage Adjustment

1. Push S501 on relay control P.C.B.. The charge relay turns to OFF position. Check the supplied voltage. If it is not same value (Prepare Adjustment : ± DC10.5 ± 0.1V), adjust the value again.
2. Adjust **VR601** with pressing S501 to the position that D605 begin to turn on.
3. And next, adjust **VR602** with pressing S501 to the position that D606 begin to turn on.

Note: The point the LED (D605, D606) to turn on is difference from the point it to turn off.
If the VR is turned too much, over the point to turn on, turn it to the point to turn off.
Then adjust again.

Adjustment point



■ Replacement Parts List

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
* All parts are supplied by MESA.
* The "<IA> <IB> <IC>" marks in Remarks indicate language of operating instructions.
<IA> : English, Spanish, French
<IB> : German, Italian, French
<IC> : Dutch, Danish

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKM0216A-N	CABINET	1	
2	RGK0502-M	SIDE PANEL(L)	1	
3	RGK0503-M	SIDE PANEL(R)	1	
4	RGK1077-N	ORNAMENT	1	
5	RGK1078-N	ORNAMENT	1	
6	XTBS3+20FFB1	SCREW	10	
7	RGW0161-NJ	KNOB,SELECTOR	1	
8	RGW0180-NJ	KNOB,VOLUME	1	
9	RHD30007-S	SCREW	6	
10	RHD30034	SCREW	8	
11	XTWS3+8T	SCREW	1	
12	RJP2A6901-U	PIN	2	
13	XTBS3+8JFB1	SCREW	31	
14	XTB2+5F	SCREW	2	
15	RMG0127	RUBBER	1	
16	XTB3+20JFB	SCREW	11	
17	REZ1133	WIRE ASS'Y	1	
18	XTW3+20T	SCREW	4	
19	XXE3D3FZS	WASHER	2	
20	XTW3+15T	SCREW	2	
21	XTBS3+8JFB1	SCREW	2	
22	REZ1131	WIRE ASS'Y	1	
23	XTB3+8JFB	SCREW	6	
24	XTW3+8T	SCREW	1	
25	XWC4B	WASHER	1	
26	XWD12A	WASHER	1	
27	RDG0222	GEAR	1	
28	RDG0229	GEAR	1	
29	RDK0021	LOCK ARM	1	
30	REK0026	LAMP	2	
31	REZ0547	WIRE ASS'Y	1	
32	XTB3+8JFZ	SCREW	2	
33	REZ1134	WIRE ASS'Y	1	
34	RGK0517-N	METER FRAME	1	
35	RGK0525-N	COVER(L)	1	
36	RGK0526-N	COVER(R)	1	
37	RGQ0103-J	BATTERY CASE	1	
38	RGR0273B-A2	REAR PANEL	1	(E,EG)
38	RGR0273B-B1	REAR PANEL	1	(EB)
39	RGU0030-A	BUTTON,POWER	1	
40	RGU0609-N	BUTTON,PUSH	5	
41	RGU0830-N	BUTTON,OPEN	1	
42	RGW0162-NJ	KNOB,BALANCE	2	
43	RHD30011	SCREW	4	
44	RHN30002	NUT	2	
45	RHN90001	NUT	1	
46	RJS2A6702	AC INLET	1	
47	RKA0035	FOOT	4	
48	RKF0295B-N	COVER	1	
49	RKU0046-N	RUBBER	1	
50	RMA0651	HINGE(L)	1	
51	RMA0652	HINGE(R)	1	
52	RMB0301	SPRING	1	
53	RMF0146	BATTERY CUSHION	1	
54	RMF0148	BATTERY CUSHION	1	
55	RMF0149	BATTERY CUSHION	2	
56	RMG0013A-K	RUBBER	4	
57	RMG0305-H	RUBBER	2	
58	RMG0506-K	RUBBER	3	
59	RMR0623-N	LOCK PIN	1	
60	RMX0084	SPACER	2	
61	RQLA0203	STICKER	1	
62	RSE0002	METER	1	
63	RYP0872A-N	PANEL	1	
64	SKYD4	RUBBER	4	
65	SNEA204-1S	EARTH TERMINAL	1	
66	RHN70003	NUT	1	
67	SNTA421-1	WASHER	1	
68	XNG4B	NUT	1	
70	XNS9	NUT	2	
71	XTBS26+8J	SCREW	21	
⚠ A1	RJA0062-K	AC POWER SUPPLY CORD	1	(E,EG)
⚠ A1	RJA0063-K	AC POWER SUPPLY CORD	1	(EB)
A2	RQA0117	WARRANTY CARD	1	
A3	RQCB0169	SERVICE CENTER LIST	1	
A4	RQT4610-E	OPERATING INSTRUCTIONS	1	(E,EB), <IA>
A4	RQT4612-D	OPERATING INSTRUCTIONS	1	(EG), <IB>
A4	RQT4613-H	OPERATING INSTRUCTIONS	1	(EG), <IC>
A5	RHD30037	SCREW	2	
A6	SFDHM03N02	PIN CORD	1	
A8	RFKNUC3000EN	BATTERY CASE ASS'Y	1	
⚠ C1	ECKWRS102MBC	250V 1000P	1	
C101,02	ECA1EPXS101B	25V 100U	2	
C103,04	ECCR1H820JC5	50V 82P	2	
C105,06	ECHR1H472JZ3	50V 4700P	2	
C107,08	ECA0JPXS102E	6.3V 1000U	2	
C109,10	ECHR1H473GZW	50V 0.047U	2	
C111,12	ECHR1H103GZ3	50V 0.01U	2	
C113,14	ECHR1H332GZ3	50V 3300P	2	
C115,16	ECA1HBX3R3B	50V 3.3U	2	
C117,18	ECHR1H472JZ3	50V 4700P	2	
C119,20	ECHR1H473GZW	50V 0.047U	2	
C151-54	ECCR1H820JC5	50V 82P	4	
C161-70	ECCR1H820JC5	50V 82P	10	
C173,74	ECCR1H820JC5	50V 82P	2	
C177-84	ECCR1H820JC5	50V 82P	8	
C201-06	ECA1HPXS010B	50V 1U	6	
C208	ECA1HPXS3R3	50V 3.3U	1	
C209	ECA1HPXS010B	50V 1U	1	
C211	ECA1HPXS3R3	50V 3.3U	1	
C212	ECA1EPXS220B	25V 22U	1	
C301,02	ECA1CPXS221B	16V 220U	2	
C303,04	ECHR1H121JZ3	50V 120P	2	
C305,06	ECHR1H472JZ3	50V 4700P	2	
C309,10	ECHR1H472JZ3	50V 4700P	2	
C311,12	RCE1EBX101EG	25V 100U	2	
C313,14	ECHR1H472JZ3	50V 4700P	2	
C315,16	ECHR1H473GZW	50V 0.047U	2	
C317,18	ECQV1H104JR3	50V 0.1U	2	
C351,52	ECHR1H121JZ3	50V 120P	2	
C353,54	ECHR1H472JZ3	50V 4700P	2	
C355,56	EEUPL0J472ZE	25V 4700U	2	
C357,58	ECHR1H102JZ3	50V 1000P	2	
C359,60	ECHR1H472JZ3	50V 4700P	2	
C361,62	RCE1EBX101EG	25V 100U	2	
C363,64	ECHR1H472JZ3	50V 4700P	2	
C375,76	ECA1CPXS221B	16V 220U	2	
C403,04	ECA1EBX100B	25V 10U	2	
C405,06	ECCR1H050CC5	50V 5P	2	
C407,08	ECA1CBX470B	16V 47U	2	
C409,10	ECHR1H102JZ3	50V 1000P	2	
C411	ECA0JPXS101	6.3V 100U	1	
C412,13	ECQV1H104JR3	50V 0.1U	2	
C415,16	ECKD1H471KB	50V 470P	2	
C501,02	ECQV1H104JR3	50V 0,1U	2	
C503	ECA1HPXS4R7B	50V 4.7U	1	
C504	ECA1EPXS100B	25V 10U	1	
C505,06	ECQV1H104JR3	50V 0.1U	2	
C507	ECA1EPXS100B	25V 10U	1	
C508	ECQV1H104JR3	50V 0.1U	1	
C509	ECQV1H224JM3	50V 0.22U	1	
C510	ECA1EPXS100B	25V 10U	1	
C511	ECQV1H154JM3	50V 0.15U	1	
C513,14	ECA1HPXS4R7B	50V 4.7U	2	
C515	ECA1HPXS010B	50V 1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C516	ECHR1H472JZ3	50V 4700P	1	
C517	ECA1EPXS100B	25V 10U	1	
C518	ECQV1H224JM3	50V 0.22U	1	
C601	ECA1CPXS470B	16V 47U	1	
C602-05	ECA1EPXS100B	25V 10U	4	
C606	ECA1HPXS010B	50V 1U	1	
C608	ECA1HPXS010B	50V 1U	1	
C610,11	ECA1EPXS100B	25V 10U	2	
C613	ECA1HPXS4R7B	50V 4.7U	1	
C614	ECQV1H473JM3	50V 0.047U	1	
C615	ECQV1H474JM3	50V 0.47U	1	
C616,17	ECA1HPXS4R7B	50V 4.7U	2	
⚠ C701,02	ECESX1E103UN	25V 10000U	2	
C705,06	ECA1EPXS100B	25V 10U	2	
⚠ C707,08	ECES1VV332GZ	35V 3300U	2	
C709,10	ECA1EPXS470B	25V 47U	2	
C711	ECQV1H104JR3	50V 0.1U	1	
C713,14	ECQV1H104JR3	50V 0.1U	2	
C716	ECHR1H103JZ3	50V 0.01U	1	
C718	ECA1HPXS3R3	50V 3.3U	1	
C719,20	ECA1EPXS470B	25V 47U	2	
C721,22	ECA1HPXS010B	50V 1U	2	
CN601-03	SJS50578JQ	CONNECTOR(5P)	3	
CP1-P3	RJP1A4204-1	CONNECTOR(4P)	3	
CP4	SJT3213	CONNECTOR(2P)	1	
CP353	SJT3513	CONNECTOR(5P)	1	
CP601-03	SJT30545JQ	CONNECTOR(5P)	3	
CP604	SJT3011	CONNECTOR(11P)	1	
CP605	SJT3511	CONNECTOR(5P)	1	
CP606	RJP1A9103	CONNECTOR(3P)	1	
CP607	SJT3511	CONNECTOR(5P)	1	
CP608	RJP1A9103	CONNECTOR(3P)	1	
CP609	SJT3213	CONNECTOR(2P)	1	
CP611	SJT3213	CONNECTOR(2P)	1	
CP612	RJP1A9104	CONNECTOR(4P)	1	
CP613	SJT3417	CONNECTOR(4P)	1	
CP614	SJT3213	CONNECTOR(2P)	1	
CP615	RJP1A9103	CONECTOR(3P)	1	
CP616	RJP1A9104	CONNECOTR(4P)	1	
CP617,18	SJT3215	CONNECTOR(2P)	2	
CP701	RJP1A9207	CONNECOTR(7P)	1	
CP702	RJP1A9204	CONNECOTR(4P)	1	
CP204A,5A	RJP1A9103	CONNECTOR(3P)	2	
CP204B,5B	RJP1A9103	CONNECTOR(3P)	2	
TP701,02	SJT3209	CONNECTOR(2P)	2	
D1,D2	MA165	DIODE	2	
D101-04	MA27W-A	DIODE	4	
D301-04	MA27W-A	DIODE	4	
D305	MA150DDFV	DIODE	1	
D307,08	MA150DDFV	DIODE	2	
D351-54	MA29WA	DIODE	4	
D355,56	MA165	DIODE	2	
D402	MA165	DIODE	1	
D404,05	LN88RCPP	LED	2	
D406,07	MA165	DIODE	2	
D501	MA165	DIODE	1	
D503	LN88RCPP	LED	1	
D505,06	MA165	DIODE	2	
D508	MA165	DIODE	1	
D509	MA167	DIODE	1	
D510,11	MA165	DIODE	2	
D513-15	MA165	DIODE	3	
D517-19	MA165	DIODE	3	
D601-04	MA150DDFV	DIODE	4	
D605,06	LN88RCPP	LED	2	
D607,08	MA150DDFV	DIODE	2	
D609,10	LN846RP-C	LED	2	
D611	LN01301C	LED	1	
D612	LN01401C	LED	1	
D613	LN01201C	LED	1	
D614,15	MA27W-A	DIODE	2	
D616,17	MA150DDFV	DIODE	2	
D618,19	MA182	DIODE	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D620,21	MA150DDFV	DIODE	2	
D622-24	MA182	DIODE	3	
D625,26	MA150DDFV	DIODE	2	
⚠ D701-12	D1NK20H-4084	DIODE	12	
D713,14	D1NK20H-4084	DIONE	2	
D715-19	MA150DDFV	DIODE	5	
D721-23	D1NK20H-4084	DIODE	3	
D727,28	D1NK20H-4084	DIODE	2	
D729-32	MA150DDFV	DIODE	4	
⚠ F1	XBA2C03TB0	FUSE	1	
⚠ F701,02	XBA2C05TB0	FUSE	2	
IC101	NJM4580DD	IC	1	
IC102	0P-271GP	IC	1	
IC301	NJM4580DD	IC	1	
IC302	0P-271GP	IC	1	
IC351	NJM4580DD	IC	1	
IC352	0P-271GP	IC	1	
IC401	M5216P	IC	1	
IC501	TC74HC14AP	IC	1	
IC502,03	TC74HC02AP	IC	2	
IC504	S8081B	IC	1	
IC505	TC74HC11AP	IC	1	
IC506	TC74HC74AP	IC	1	
IC507	TC74HC02AP	IC	1	
IC601	NJM064D	IC	1	
⚠ IC602	S81250PGT	IC	1	
IC603,04	S80840ANY	IC	2	
⚠ IC605	S81250PGZ	IC	1	
⚠ IC701	M5F78M12L	IC	1	
⚠ IC702	M5F79M12L	IC	1	
⚠ IC703,04	M5F78M18L	IC	2	
IC705,06	TA8632P	IC	2	
JK101-04	RJH2402A	JACK,IN/OUT	4	
JK301	RJH2404A	JACK,PRE OUT	1	
JK601	QJA0455ZC-A	JACK,MONITOR PHONES	1	
⚠ L1	RLQZ271M	COIL	1	
L151-54	ELEPK101KA	COIL	4	
L161-64	ELEPK101KA	COIL	4	
L169,70	ELEPK101KA	COIL	2	
L351,52	ELEPK101KA	COIL	2	
L401,02	ELEPK101KA	COIL	2	
P1	RPG4060	PACKING CASE	1	
P2	RPN0688	PAD	1	
P3	SPP730	PROTECTION COVER	1	
P4	RPQ0291	PAD(BATTERY)	1	
P5	RPQ0310	PAD1	1	
P6	RPQ0311	PAD2	2	
P7	RPQ0339	PAD3	1	
P8	RPF0139	PROTECTION COVER	1	
P9	XZB05X06C03	POLYETHYLENE COVER	1	
P10	XZB10X30C03	POLYETHYLENE COVER	1	
P11	XZB25X34C03X	POLYETHYLENE COVER	1	
P12	RPH0101	KRAFT PAPER	1	
Q101-04	2SK369GR	TRANSISTOR	4	
Q105-08	2SC2458-A	TRANSISTOR	4	
Q303-06	2SC2458-A	TRANSISTOR	4	
Q307-10	2SK369GR	TRANSISTOR	4	
Q311,12	2SC2458-A	TRANSISTOR	2	
Q351-54	2SC2458-A	TRANSISTOR	4	
Q355-58	2SK369GR	TRANSISTOR	4	
Q359,60	2SC2458-A	TRANSISTOR	2	
Q401	2SC2458-A	TRANSISTOR	1	
Q402	2SB1030ATA	TRANSISTOR	1	
Q403	DTC114EST	TRANSISTOR	1	
Q404	DTC124EST	TRANSISTOR	1	
Q501,02	DTC144EST	TRANSISTOR	2	
Q503	DTA144ESTP	TRANSISTOR	1	
Q504	DTC124EST	TRANSISTOR	1	
Q505	DTC144EST	TRANSISTOR	1	
Q506	DTC124EST	TRANSISTOR	1	
Q507	DTC114EST	TRANSISTOR	1	
Q508	2SB1030ATA	TRANSISTOR	1	

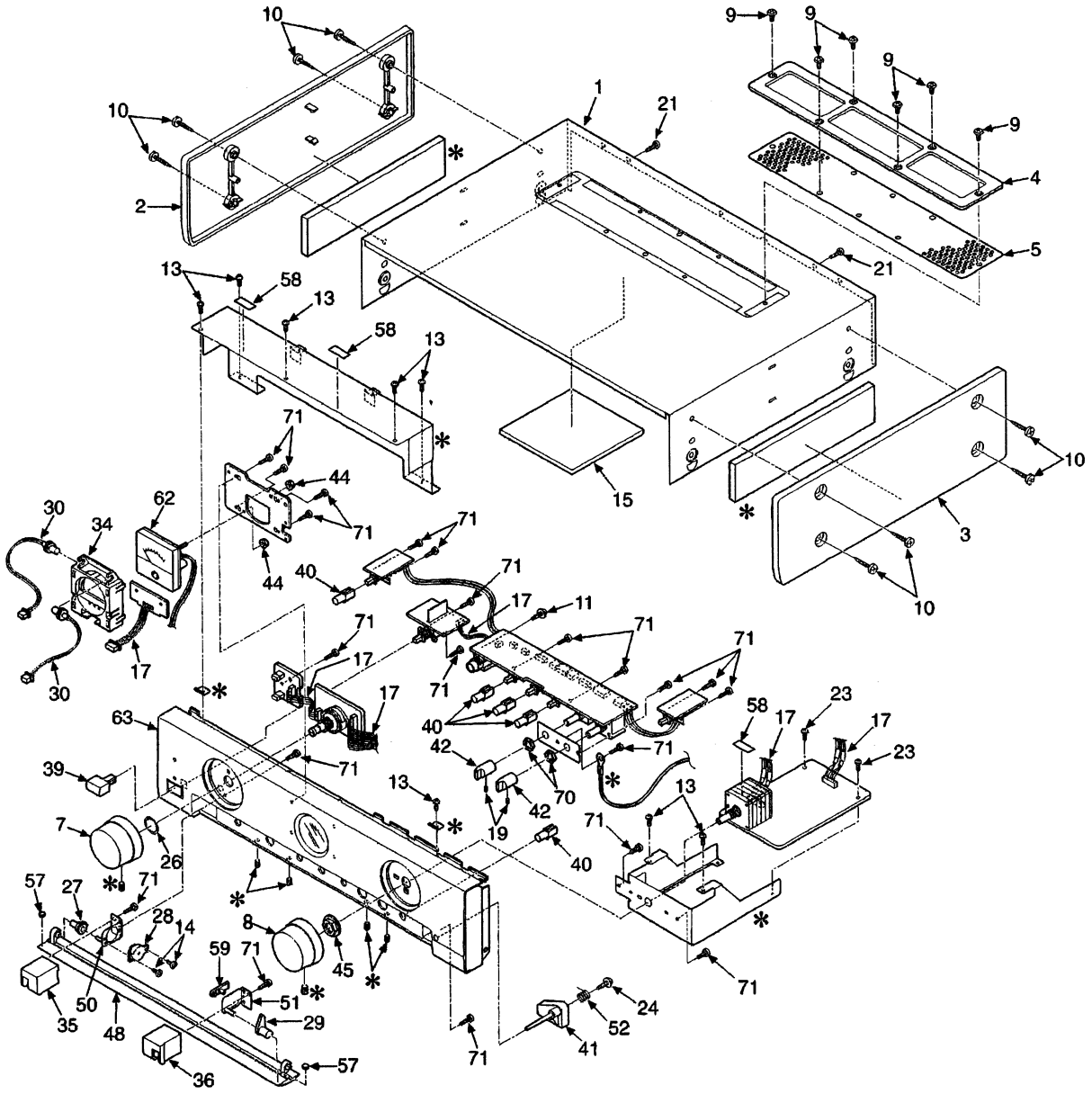
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q601	2SA1048ABCTA	TRANSISTOR	1	
Q602	2SC2458-A	TRANSISTOR	1	
Q603,04	DTA144ESTP	TRANSISTOR	2	
Q605	2SC2458-A	TRANSISTOR	1	
Q606	DTA144ESTP	TRANSISTOR	1	
Q607,08	DTC124EST	TRANSISTOR	2	
Q609-11	DTA114EST	TRANSISTOR	3	
Q612-14	2SB1030ATA	TRANSISTOR	3	
Q616	DTA114EST	TRANSISTOR	1	
Q617	DTC144EST	TRANSISTOR	1	
Q701,02	2SD1761DEF	TRANSISTOR	2	
Q703	DTC144EST	TRANSISTOR	1	
Q704	DTA144ESTP	TRANSISTOR	1	
Q705,06	DTC124EST	TRANSISTOR	2	
Q707,08	DTA114EST	TRANSISTOR	2	
R101,02	ERDS2FJ473	1/4W 47K	2	
R103,04	ERDS2FJ150	1/4W 15	2	
R105-10	ERDS2FJ272	1/4W 2.7K	6	
R111,12	ERDS2FJ333	1/4W 33K	2	
R113-18	ERDS2FJ121	1/4W 120	6	
R119,20	ERDS2FJ683	1/4W 68K	2	
R121,22	ERDS2FJ562	1/4W 5.6K	2	
R123,24	ERDS2FJ101	1/4W 100	2	
R125,26	ERDS2FJ103	1/4W 10K	2	
R127,28	ERDS2FJ100	1/4W 10	2	
R129,30	ERDS2FJ102	1/4W 1K	2	
R131,32	ERDS2FJ334	1/4W 330K	2	
R133,34	ERDS2FJ561	1/4W 560	2	
R151-54	ERDS2FJ102	1/4W 1K	4	
R161-70	ERDS2FJ122	1/4W 1.2K	10	
R181-84	ERDS2FJ471	1/4W 470	4	
R201,02	ERDS2FJ102	1/4W 1K	2	
R205,06	ERDS2FJ563	1/4W 56K	2	
R207	ERDS2FJ824	1/4W 820K	1	
R301,02	ERDS2FJ224	1/4W 220K	2	
R303,04	ERDLS2J221T	1/4W 220	2	
R305-08	ERDLS2J681T	1/4W 680	4	
R311,12	ERDS2FJ333	1/4W 33K	2	
R313,14	ERDLS2J221T	1/4W 220	2	
R315,16	ERDS2FJ102	1/4W 1K	2	
R319,20	ERDS2FJ101	1/4W 100	2	
R321,22	ERDS2FJ103	1/4W 10K	2	
R323,24	ERDS2FJ100	1/4W 10	2	
R325,26	ERDS2FJ102	1/4W 1K	2	
R327,28	ERDS2FJ823	1/4W 82K	2	
R329,30	ERDS2FJ470	1/4W 47	2	
R331,32	ERDS2FJ2R2	1/4W 2.2	2	
R333,34	ERDS2FJ153	1/4W 15K	2	
R335,36	ERDS2FJ222	1/4W 2.2K	2	
R337,38	ERDLS2J681T	1/4W 680	2	
R351,52	ERDS2FJ473	1/4W 47K	2	
R353,54	ERDLS2VJ221T	1/4W 220	2	
R355,56	ERDS2FJ333	1/4W 33K	2	
R357-60	ERDS2FJ681	1/4W 680	4	
R361,62	ERDS2FJ221	1/4W 220	2	
R363,64	ERDS2FJ153	1/4W 15K	2	
R365,66	ERDS2FJ222	1/4W 2.2K	2	
R367,68	ERDS2FJ681	1/4W 680	2	
R369,70	ERDLS2VJ221T	1/4W 220	2	
R371,72	ERDS2FJ102	1/4W 1K	2	
R373,74	ERDS2FJ101	1/4W 100	2	
R375,76	ERDS2FJ100	1/4W 10	2	
R377,78	ERDS2FJ103	1/4W 10K	2	
R379,80	ERDS2FJ102	1/4W 1K	2	
R381,82	ERDS2FJ823	1/4W 82K	2	
R383,84	ERDS2FJ471	1/4W 470	2	
R385,86	ERDLS2VJ221T	1/4W 220	2	
R391,92	ERDLS2VJ2R2T	1/4W 2.2	2	
R401,02	ERDS2FJ101	1/4W 100	2	
R403,04	ERDS2FJ103	1/4W 10K	2	
R405,06	ERDS2FJ222	1/4W 2.2K	2	
R407,08	ERDS2FJ103	1/4W 10K	2	
R417,18	ERDS2FJ473	1/4W 47K	2	
R419,20	ERDS2FJ680	1/4W 68	2	
R423	ERDS2FJ334	1/4W 330K	1	
R424	ERDS2FJ472	1/4W 4.7K	1	
R425	ERDS2FJ473	1/4W 47K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R426	ERDS2FJ104	1/4W 100K	1	
R427	ERDAS3J103T	1/4W 10K	1	
R429,30	ERDS2FJ471	1/4W 470	2	
R501,02	ERDS2FJ104	1/4W 100K	2	
R503	ERDS2FJ473	1/4W 47K	1	
R504	ERDS2FJ104	1/4W 100K	1	
R505	ERDS2FJ564	1/4W 560K	1	
R506	ERDS2FJ223	1/4W 22K	1	
R507	ERDS2FJ104	1/4W 100K	1	
R508-10	ERDS2FJ471	1/4W 470	3	
R511-13	ERDAS3J103T	1/4W 10K	3	
R515	ERDAS3J103T	1/4W 10K	1	
R516	ERDS2FJ473	1/4W 47K	1	
R517	ERDAS3J103T	1/4W 10K	1	
R520	ERDS2FJ104	1/4W 100K	1	
R521	ERDS2FJ473	1/4W 47K	1	
R601	ERDS2FJ223	1/4W 22K	1	
R602	ERDS2FJ393	1/4W 39K	1	
R603	ERDS2FJ474	1/4W 470K	1	
R604	ERDS2FJ473	1/4W 47K	1	
R605	ERDS2FJ392	1/4W 3.9K	1	
R606	ERDS2FJ153	1/4W 15K	1	
R607	ERDS2FJ124	1/4W 120K	1	
R608	ERDS2FJ104	1/4W 100K	1	
R609,10	ERDS2FJ473	1/4W 47K	2	
R611	ERDS2FJ472	1/4W 4.7K	1	
R612,13	ERDS2FJ681	1/4W 680	2	
R614	ERDS2FJ273	1/4W 27K	1	
R615,16	ERDS2FJ104	1/4W 100K	2	
R617,18	ERDS2FJ100	1/4W 10	2	
R619	ERDS2FJ563	1/4W 56K	1	
R620	ERDS2FJ473	1/4W 47K	1	
R621	ERDS2FJ563	1/4W 56K	1	
R622	ERDS2FJ473	1/4W 47K	1	
R623	ERDS2FJ152	1/4W 1.5K	1	
R624	ERDS2FJ473	1/4W 47K	1	
R625	ERDS2FJ153	1/4W 15K	1	
R626	ERDS2FJ561	1/4W 560	1	
R627	ERDS2FJ473	1/4W 47K	1	
R628	ERDLS2J751T	1/4W 750	1	
R629-31	ERDS2FJ122	1/4W 1.2K	3	
R632	ERDS2FJ103	1/4W 10K	1	
R633	ERDS2FJ473	1/4W 47K	1	
R635,36	ERDS2FJ103	1/4W 10K	2	
R637	ERDS2FJ473	1/4W 47K	1	
R638	ERDS2FJ103	1/4W 10K	1	
R639,40	ERDS2FJ122	1/4W 1.2K	2	
R641-45	ERDS2FJ102	1/4W 1K	5	
R646	ERDS2FJ472	1/4W 4.7K	1	
R651,52	ERDS2FJ180	1/4W 18	2	
R653	ERDS2FJ153	1/4W 15K	1	
R654-58	ERDAS3J271T	1/4W 270	5	
R701,02	ERDS2FJ101	1/4W 100	2	
R704,05	ERG1SJ561	1W 560	2	
R707,08	ERX1SJ1R5E	1W 1.5	2	
R709,10	ERX2SJ2R7H	2W 2.7	2	
R711,12	ERDS2FJ333	1/4W 33K	2	
R713,14	ERDS2FJ224	1/4W 220K	2	
R715,16	ERDS2FJ222	1/4W 2.2K	2	
R717	ERDS2FJ103	1/4W 10K	1	
⚠ RL1,L2	RSY0016-D	RELAY	2	
⚠ RL201-06	RSY0031-A	RELAY	6	
⚠ RL208,09	RSY0031-A	RELAY	2	
⚠ RL211,12	RSY0031-A	RELAY	2	
⚠ RL301	RSY0031-A	RELAY	1	
⚠ RL402	SSY115	RELAY	1	
⚠ RL701-03	SSY115	RELAY	3	
S501	EVQ21405R	SW,PUSH	1	
S601	RSR6A001-A	SW,INPUT SELECTOR	1	
S602	ESB8279V	SW,POWER	1	
⚠ S603	ESB90797V	SW,MAIN POWER	1	
S605	RSP3004-A	SW,PUSH	1	
S608	RSR3A001-A	SW,TAPE MONITOR	1	
S609	RSP2B025-A	SW,BALANCE	1	
⚠ T1	RTP7D4E001-W	POWER TRANSFORMER	1	(E,EG)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ T1	RTP7D4B001-W	POWER TRANSFORMER	1	(EB)
VR201	EWCPVCS25770	VR,VOLUME	1	
VR202	EWCPA1001G15	VR,BALANCE	1	
VR601,02	EVN38CA00B54	VR,VOLTAGE ADJ.	2	
VR701,02	EVN38CA00B15	VR,BATT.CHARGE ADJ.	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

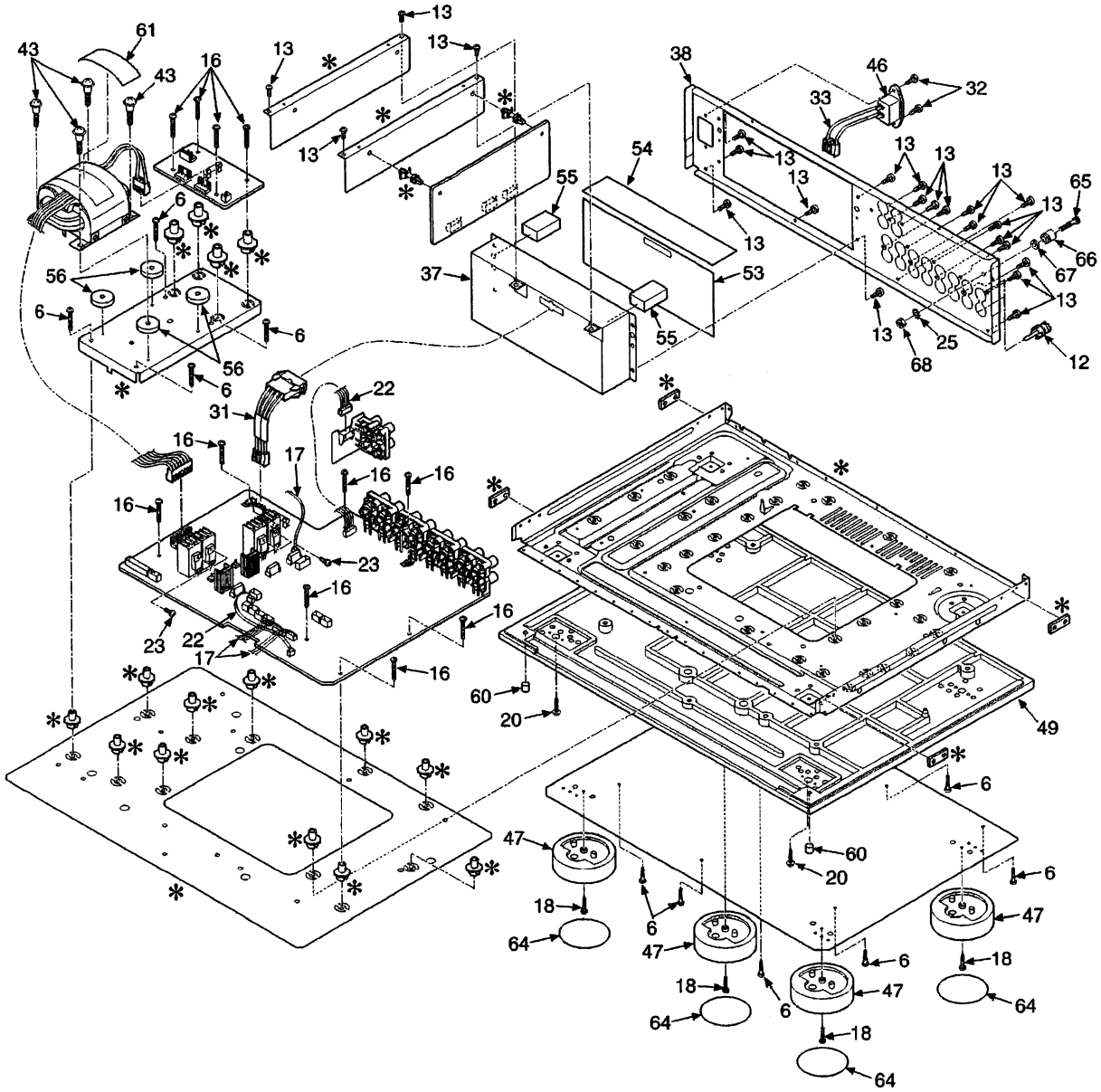
■ Cabinet Parts Location



We do not supply those items of parts marked ✻.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKM0216A-N	CABINET	1	
2	RGK0502-M	SIDE PANEL(L)	1	
3	RGK0503-M	SIDE PANEL(R)	1	
4	RGK1077-N	ORNAMENT	1	
5	RGK1078-N	ORNAMENT	1	
6	XTBS3+20FFB1	SCREW	10	
7	RGW0161-NJ	KNOB,SELECTOR	1	
8	RGW0180-NJ	KNOB,VOLUME	1	
9	RHD30007-S	SCREW	6	
10	RHD30034	SCREW	8	
11	XTWS3+8T	SCREW	1	
12	RJP2A6901-U	PIN	2	
13	XTBS3+8JFB1	SCREW	31	
14	XTB2+5F	SCREW	2	
15	RMG0127	RUBBER	1	
16	XTB3+20JFB	SCREW	11	
17	REZ1133	WIRE ASS'Y	1	
18	XTW3+20T	SCREW	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
19	XXE3D3FZS	WASHER	2	
20	XTW3+15T	SCREW	2	
21	XTBS3+8JFB1	SCREW	2	
22	REZ1131	WIRE ASS'Y	1	
23	XTB3+8JFB	SCREW	6	
24	XTW3+8T	SCREW	1	
25	XWC4B	WASHER	1	
26	XWD12A	WASHER	1	
27	RDG0222	GEAR	1	
28	RDG0229	GEAR	1	
29	RDK0021	LOCK ARM	1	
30	REK0026	LAMP	2	
31	REZ0547	WIRE ASS'Y	1	
32	XTB3+8JFZ	SCREW	2	
33	REZ1134	WIRE ASS'Y	1	
34	RGK0517-N	METER FRAME	1	
35	RGK0525-N	COVER(L)	1	
36	RGK0526-N	COVER(R)	1	

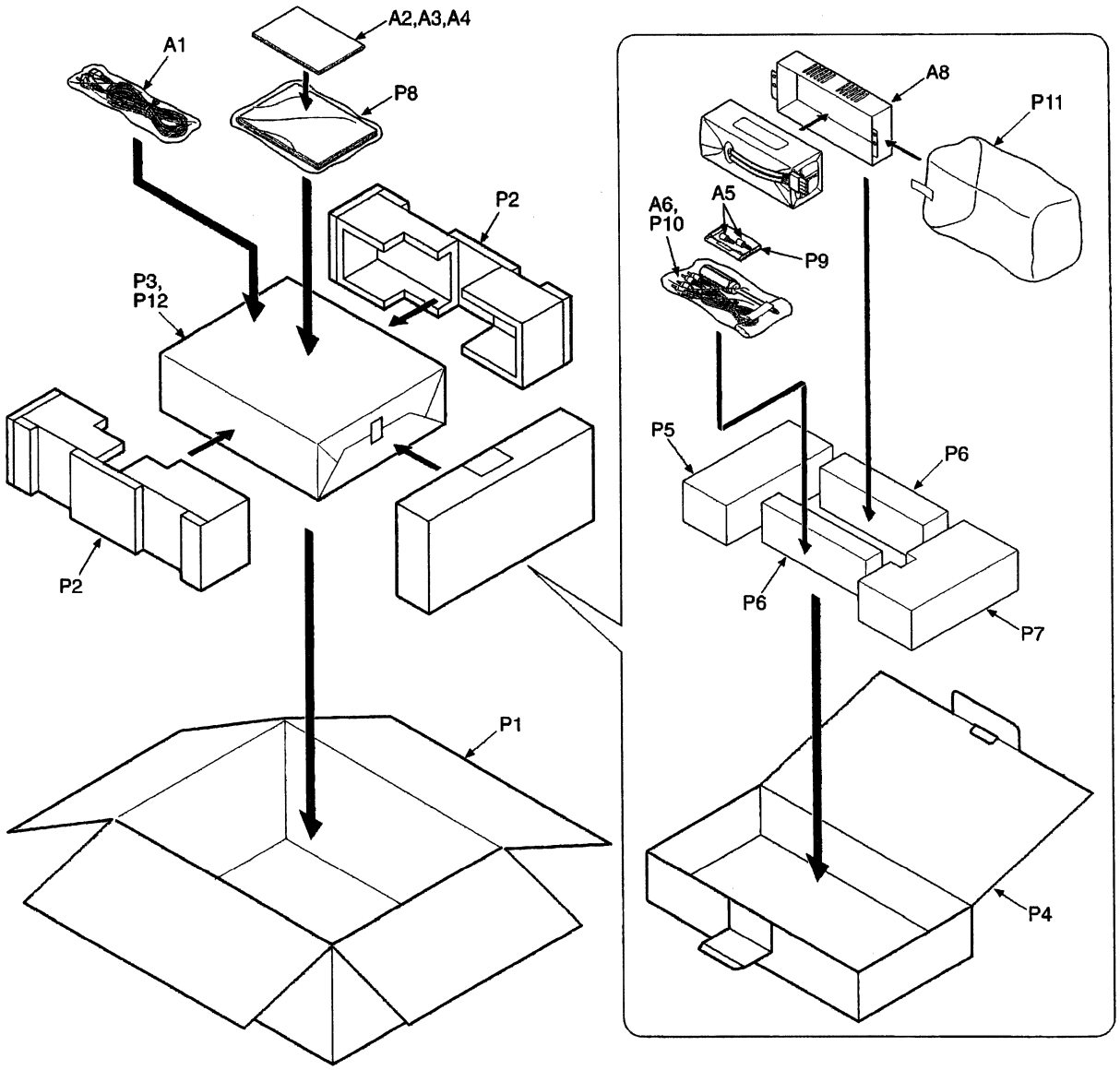


We do not supply those items of parts marked ✻.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
37	RGQ0103-J	BATTERY CASE	1	
38	RGR0273B-A2	REAR PANEL	1	(E,EG)
38	RGR0273B-B1	REAR PANEL	1	(EB)
39	RGU0030-A	BUTTON,POWER	1	
40	RGU0609-N	BUTTON,PUSH	5	
41	RGU0830-N	BUTTON,OPEN	1	
42	RGW0162-NJ	KNOB,BALANCE	2	
43	RHD30011	SCREW	4	
44	RHN30002	NUT	2	
45	RHN90001	NUT	1	
46	RJS2A6702	AC INLET	1	
47	RKA0035	FOOT	4	
48	RKF0295B-N	COVER	1	
49	RKU0046-N	RUBBER	1	
50	RMA0651	HINGE(L)	1	
51	RMA0652	HINGE(R)	1	
52	RMB0301	SPRING	1	
53	RMF0146	BATTERY CUSHION	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
54	RMF0148	BATTERY CUSHION	1	
55	RMF0149	BATTERY CUSHION	2	
56	RMG0013A-K	RUBBER	4	
57	RMG0305-H	RUBBER	2	
58	RMG0506-K	RUBBER	3	
59	RMR0623-N	LOCK PIN	1	
60	RMX0084	SPACER	2	
61	RQLA0203	STICKER	1	
62	RSE0002	METER	1	
63	RYP0672A-N	PANEL	1	
64	SKYD4	RUBBER	4	
65	SNEA204-1S	EARTH TERMINAL	1	
66	RHN70003	NUT	1	
67	SNTA421-1	WASHER	1	
68	XNG4B	NUT	1	
70	XNS9	NUT	2	
71	XTBS26+8J	SCREW	21	

■ Packaging



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ A1	RJA0062-K	AC POWER SUPPLY CORD	1	(E,EG)
⚠ A1	RJA0063-K	AC POWER SUPPLY CORD	1	(EB)
A2	RQA0117	WARRANTY CARD	1	
A3	RQCB0169	SERVICE CENTER LIST	1	
A4	RQT4610-E	OPERATING INSTRUCTIONS	1	(E,EB)
A4	RQT4612-D	OPERATING INSTRUCTIONS	1	(EG)
A4	RQT4613-H	OPERATING INSTRUCTIONS	1	(EG)
A5	RHD30037	SCREW	2	
A6	SFDHM03N02	PIN CORD	1	
A8	RFKNUC3000EN	BATTERY CASE ASS'Y	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P1	RPG4060	PACKING CASE	1	
P2	RPN0688	PAD	1	
P3	SPP730	PROTECTION COVER	1	
P4	RPQ0291	PAD(BATTERY)	1	
P5	RPQ0310	PAD1	1	
P6	RPQ0311	PAD2	2	
P7	RPQ0339	PAD3	1	
P8	RPF0139	PROTECTION COVER	1	
P9	XZB05X06C03	POLYETHYLENE COVER	1	
P10	XZB10X30C03	POLYETHYLENE COVER	1	
P11	XZB25X34C03X	POLYETHYLENE COVER	1	
P12	RPH0101	KRAFT PAPER	1	

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